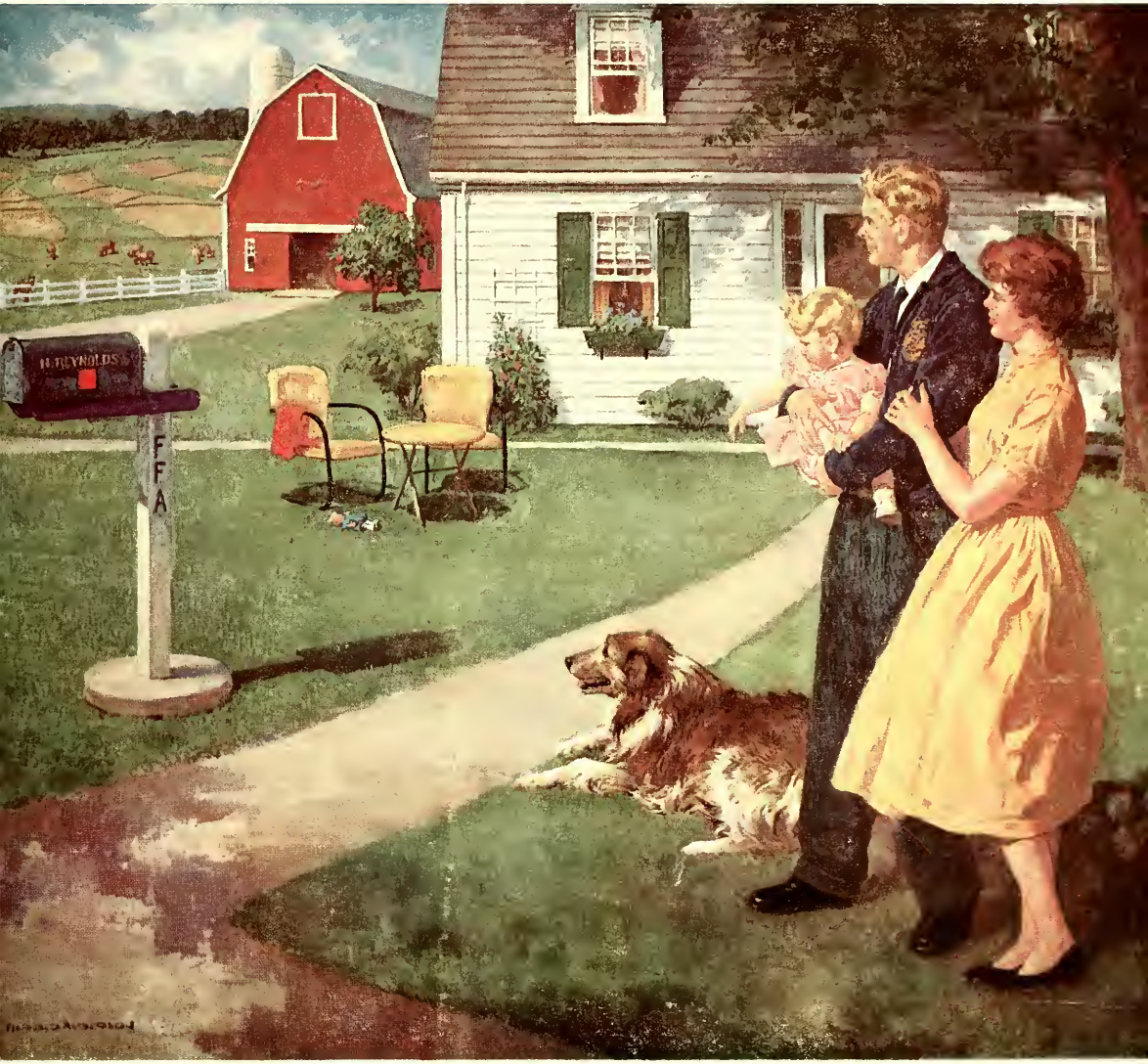
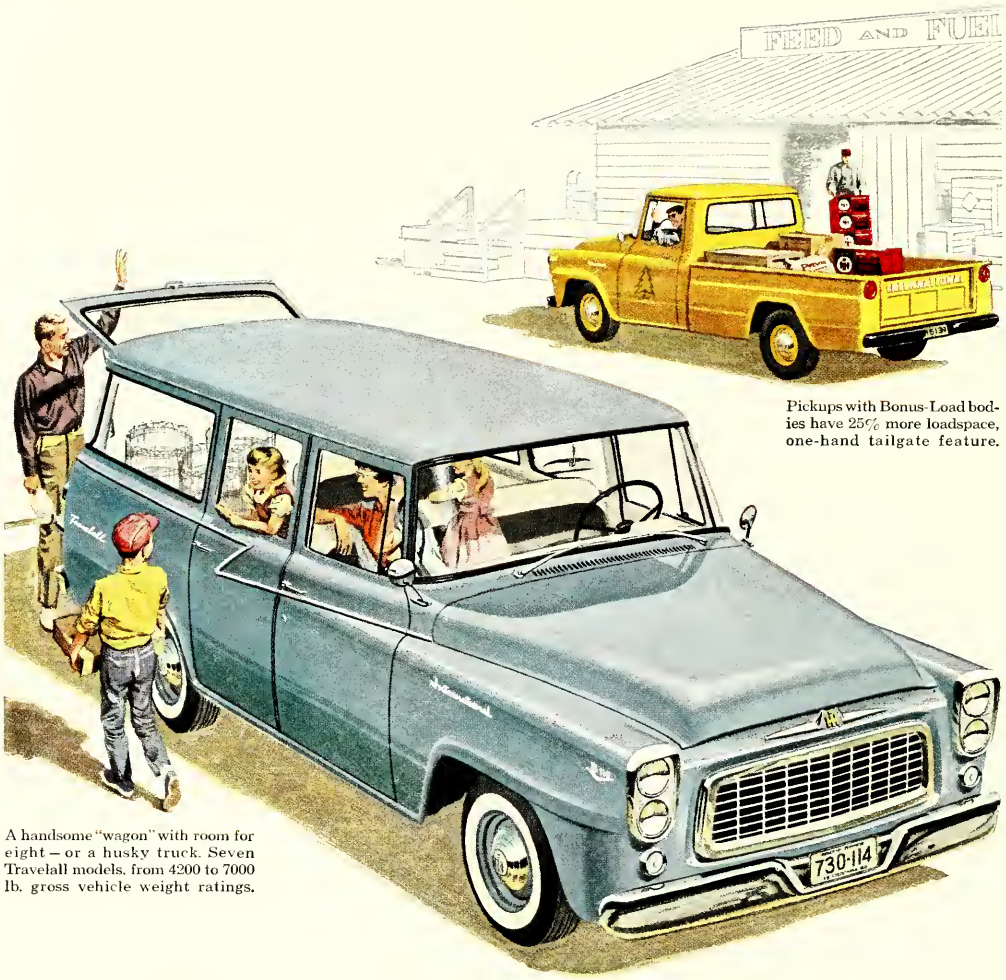
The National Future Farmer

Owned and Published by the Future Farmers of America



. . . I believe that to live and work on a good farm
is pleasant as well as challenging . . .—*From the FFA Creed*

June-July, 1960



Pickups with Bonus-Load bodies have 25% more loadspace, one-hand tailgate feature.

A handsome "wagon" with room for eight – or a husky truck. Seven Travelall models, from 4200 to 7000 lb. gross vehicle weight ratings.

The Travelall®... handy at so many chores!

It's a comfortable vehicle to take the family on a visit, a "loadable" one to bring supplies from town. You can choose from seven INTERNATIONAL Travelall models – custom or standard versions – to fit your needs.

For country roads, the Travelall has higher clearance, shorter skirts and less overhang than *any* automobile. For unusually rough going, there's a 4-wheel-drive model.

INTERNATIONAL offers as standard a 266 cu. in. V-8 engine that gives you *both* power and economy. For versatility, for style, for *value* see your INTERNATIONAL Dealer or Branch about the Travelall.

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Motor Trucks • Crawler Tractors
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INTERNATIONAL® TRUCKS

WORLD'S MOST COMPLETE LINE

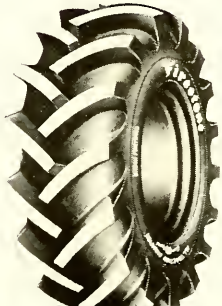
John Norton, John Norton Farms, Blythe, Calif.

Farmers you look to as leaders look to Firestone for farm tires

On the 4,700-acre Norton farm in California's Palo Verde valley, irrigated crops splash the desert with a brilliant green. A blazing sun makes agriculture a year-around business—and John Norton makes it a successful one with a well mechanized farm that produces heavy harvests of melons, vegetables and cotton. His is a model operation in an area noted for high-yield farming.

Twenty radio-equipped trucks help Mr. Norton keep things moving. And Firestone tires on every truck and tractor keep them on schedule in spite of 110° heat, hard soil and tire-mauling rocks. The valley is a tough proving ground for tires—and that's exactly why John Norton picks Firestones.

"In our experience," says Mr. Norton, "Firestone tires have *definitely* proved superior. Breaks, blowouts and failures that are common with other growers have been practically non-existent with us. Firestones have always proved a better buy for us—regardless of price."



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All Traction Champion*

Builder of the first practical pneumatic farm tire

Firestone

BETTER RUBBER FROM START TO FINISH

SAVE AND BE SURE

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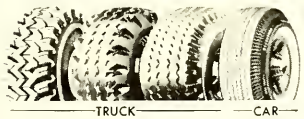

TRUCK
Super All Traction* | All Traction* | Transport*

CAR
De Luxe Champion*

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*Firestone T.M.

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OUR COVER—Our cover picture is an Official FFA Calendar painting by Artist Harold Anderson. It symbolizes the goal of many Future Farmers—establishment in farming. Each year thousands of FFA members are progressively accumulating more equity in livestock, machinery, and land. They are looking forward to the day when they can say, as our cover Future Farmer is saying, "This is OUR PLACE."

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In the next four hours, this young farmer will do as much work as his father could do in ten hours . . . 6 extra hours for increased production or more leisure time.

The wonderful new watch that science has given young farmers

When your father was your age, he had to work many more hours to produce *fewer* tons of food or feed. In the charts of the Dept. of Agriculture, one can see this steady upward climb in a farmer's productivity.

One reason is *science*. When you use science as your partner, you work near-miracles on your land.

In this scientific revolution, you and your farm machines are an essential part. *You* keep abreast of new ways to get things done faster, better. *They* have the muscle to tackle today's heavier yields by substituting low-cost horsepower for expensive manpower.

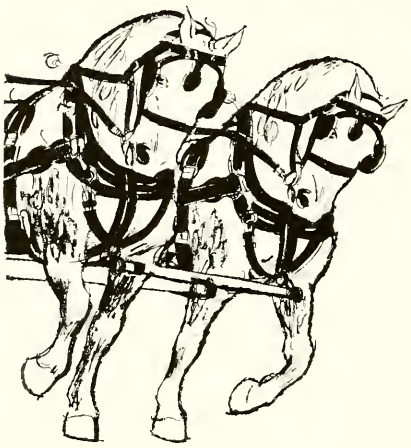
New Holland machines are *science-designed* to meet these modern needs. Take the New Holland concept of *Hay-in-a-Day* . . . the One-Man Way. With a modern New Holland Hayliner and Bale-Thrower, you alone can now bale *faster* than a two-man team.

New Holland Research is in constant touch with the exciting new developments going on in colleges and experiment stations . . . designing machines to match these advances.

Of one thing young farmers can be sure: New Holland will keep first in the mechanization of livestock farming practices. New Holland Machine Co. Division of Sperry Rand Corporation, New Holland, Pa.

NEW HOLLAND
First in Grassland Farming

Do horses Push or Pull a wagon?



Most folks say horses pull a wagon. But, some point out that the horse actually pushes against a harness and the harness does the pulling.

No matter which way you look at it, there's one thing for sure. You get better use out of horsepower when you push and pull.

That's why Myers submersible pumps give you more water with less power. The entire pump and motor are submersed in water. Scientifically designed impellers pull in water and push it to the surface. Each impeller unit is designed to add more push to the next. You get real power build-up that produces plenty of water at the top of the ground . . . enough pressure to supply every home and barn faucet with ease.

Myers submersible pumps are designed to last, too. Because the pump motor is submersed in water, it stays cool. The pump motor is lubricated by oil with a long lasting reserve supply.

Here is a cut away illustration of a Myers submersible pump, showing how impeller stages are designed to give "power push" to water.

Myers

Want additional facts on submersible pumps? Write today for a free folder describing Myers submersible pumps . . . the underwater pump you install and forget.

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Your Editors Say . . .

YOU hear a lot of talk about the future of farming. Some say that opportunities are limited, that young men should look elsewhere for an occupation. But is this true?

The present trend is to larger farms and fewer farmers. But how long can this continue?

About two and one-half to three million consumers are being added each year. Some estimate that within the next 20 years, the production needs for farm commodities on the national level will probably expand by some 45 percent. And we can expect a population increase of about 35 percent. Economists tell us that personal income will go up still more, indicating a further increase in per capita consumption for farm products. To meet these needs, farm production for many commodities must be greatly expanded.

As the number of people living in towns and cities increases, there will be more buyers for farm products. Most everyone agrees that even in the space age ahead, people are not going to be content to take their nourishment in the form of a pink pill.

These factors clearly indicate an increased demand for farm products during your lifetime. Who is going to produce them? It is unlikely that the corporation type farms will completely take over American agriculture, though they will increase. It does mean that for a farmer to be successful in the years ahead, he must be trained for his occupation. I recently heard a farmer say that, agriculture today is no place for the weak, ignorant, or indifferent. The larger farms, greater investment, and increased technology available make a better trained farmer necessary. Actually, the investment per farm worker is much higher than the investment per worker in industry.

Where can you get this training? For many, vocational agriculture has been the answer. They not only learn the latest agricultural know-how, but often Future Farmers have expanded their supervised farming programs from year to year until they are able to start farming on their own after high school graduation.

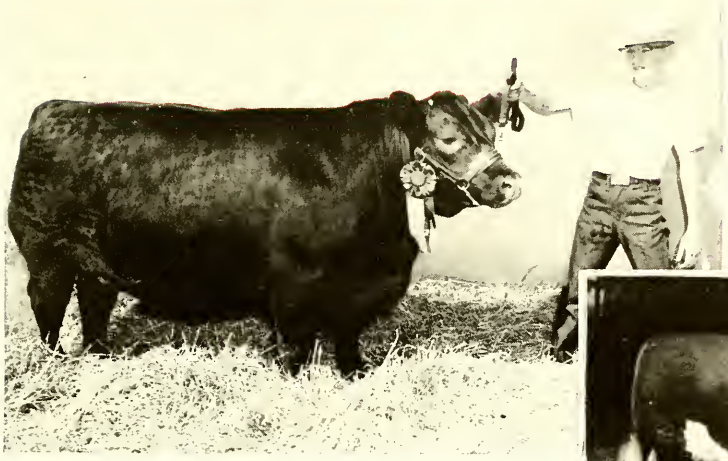
And vo-ag training continues to pay over the years. An Iowa study shows that high school graduates who completed three or more years of vocational agriculture and are now farming had a significant advantage over high school graduates without such training. Their total gross income amounted to nearly $2,000 more than the farmers without vo-ag training. And the longer they farm, the greater the difference becomes. The vo-ag graduate's increase in gross products each additional year he farmed amounted to $532 while the non vo-ag graduate's yearly increase was $357 per year.

In a Wisconsin study, sociologists report that farmers who have at some time participated in the various agricultural education programs are more likely to take up improved farm practices than those who have never had such training. Meaning of course, that the modern farmer who desires a satisfactory income must take up these improved practices and must also have the skills needed to put these practices to work on his farm.

Wilson Carnes,

Editor

PURINA VISITS FARMERS OF TOMORROW



Larry Alkire and one of his winners

Linda Alkire and one of her winners ▶

Brother and sister earn ribbons with their cattle

Linda and Larry Alkire have gone out into many a frigid northwestern Missouri winter morning to look after their livestock. They have seen many a summer sun set behind the rolling Buchanan County hills while they cared for their cattle. As a result, they have led numerous winners out of the show ring.

Linda, who is 17 and a senior in Faucett High School, is a good feeder and a good showman. She led the Champion Hereford at the Savannah, Missouri, Fair in 1958 and took the Reserve Champion honors at the Buchanan County Show in 1959. She also holds one Buchanan County award for showmanship.

Larry, who is 12 years old and with only three years experience in youth club projects, has won 32 ribbons. These include a Grand Championship at the Interstate Show in St. Joseph, where more than 400 cattle from a four-state area were shown. He also took a Grand Championship and a Championship at the county youth show. One of his animals placed tenth in the American Royal Junior Yearling Class.

Both Linda and Larry will go to college, perhaps to prepare for leadership in agriculture. Purina congratulates Linda and Larry on the strides they have made toward becoming "Farmers of Tomorrow."

* * * *

Larry and Linda Alkire raise their registered cattle on the Purina Program. There's a Purina Dealer near you, ready to advise you on feeding and management of livestock and poultry, whether you are interested in the market or the show ring.

FEED PURINA...YOU CAN DEPEND ON THE CHECKERBOARD

PROTECT YOUR FFA CAMPERS

LET US HELP PAY THE MEDICAL BILLS FROM YOUR CAMP, CONVENTION OR OTHER FFA EVENT.

Thousands have benefited from our group policies. Your group can secure this protection too! Low cost . . . prompt courteous service.

WRITE FOR DETAILS

BROTHERHOOD Mutual LIFE Insurance Co.
FORT WAYNE, INDIANA

LOOKING AHEAD!

CONCENTRATED MILK ON THE WAY

Concentrated milk may open a new era in the field of milk production and marketing. This new product is pictured as an improved evaporated milk that tastes the same as fresh whole milk to most people. The small bulk and long keeping qualities of concentrated milk would make it more convenient than fresh milk. Two forms have been developed. One is a fresh concentrate that requires refrigeration but takes only one-third the space of fresh fluid milk. The other concentrate is packaged in a tin can and needs no refrigeration. Both taste practically the same as regular fluid milk when reconstituted with water.

NEW ALFALFA VARIETY

Culver, a new alfalfa variety, has been announced by Purdue University. The first Midwest variety to be resistant to the meadow spittlebug, Culver is a winter hardy dormant type alfalfa with dark green foliage. Purdue agronomists explain that while Culver may be attacked by spittlebugs, studies show 50 percent less infestation than other varieties. This new alfalfa shows resistance to wilt and is partly resistant to leaf spot diseases and heaving. Testing of Culver took place in Washington. The first certified seed will be harvested this fall and should be available to farmers next spring.

TIMELY TIP FOR CORN GROWERS

Shallow cultivation of young corn plants is very important says Henry Foth of Michigan State University. By the time plants are four weeks old, roots in adjacent rows start to cross one another between the rows. Dr. Foth warns that growth of corn plants is mostly lateral the first six weeks. Severe damage to the oncoming corn crop may result from running cultivator shovels too deep during this time. While the roots are still growing laterally at the end of five weeks, they have penetrated to a depth of two feet below the crown of the plant.

MORE LAND CAN BE FARMED

The earth's land surface covers a vast 39 *billion* acres! Only 2½ to 3 billion acres of this total are now being cultivated. How much new land could be used for crop production is a question of great interest. No world inventory of potential cropland has ever been made says USDA, but agricultural scientists are speculating on the possible limits of agriculture. Most agree that the absolute bounds have not been reached. The best lands are already being used, they point out, but the possibility of claiming additional cropland is quite interesting. Agriculture technology may make large areas of the tropics usable. Irrigation may be extended far into the deserts and the dry, cold frontiers may also be pushed back. With these possibilities in mind, estimates on additional land for farm use range from 1 to 8 billion acres.

DISEASE-FREE PIGS AVAILABLE

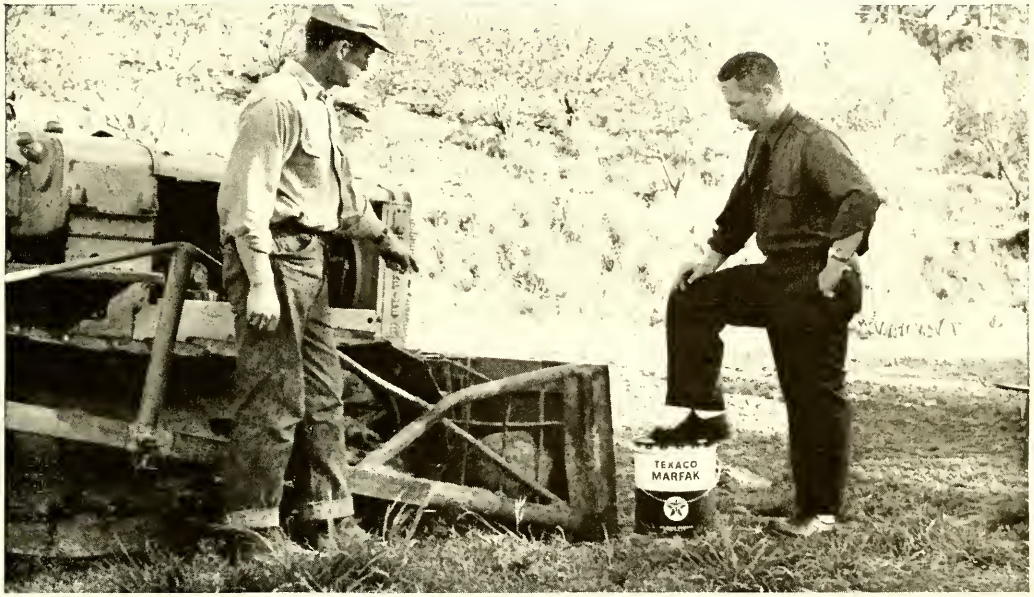
Baby pigs free from the diseases usually picked up in the first weeks of life are available in Illinois. These pigs are taken from the sow by surgery two to four days before her normal farrowing date. Breathing filtered air and fed sterilized cow's milk fortified with minerals and eggs, these pigs spend their first week in complete isolation. Then they are placed in brooders in small groups for three weeks before being moved to their new farm home. These pigs are relatively expensive and require special management practices.

This new hog-raising development will enable farmers to avoid such diseases as virus pig pneumonia, TGE, atrophic rhinitis, swine dysentery, and external parasites. Since little or none of their strength is used fighting harmful viruses and bacteria, these pigs gain faster. For instance, 100 pounds less feed per 100 pounds of comparable gain was required in recent Illinois tests. Dr. Woods warns, however, that such diseases as leptospirosis and hog cholera still require strict control measures.

HIS HOME-MADE BULLDOZER LEVELS THE GROUND FAST!

Dan Curtiss (left) whose family farm near The Dalles, Oregon, produces up to 350 tons of cherries annually, wanted a bulldozer. So, he built it himself! He utilized the rear end of an old car, operating off the tractor power take-off, to raise and lower the blade. Welded iron "baskets" on each side can be loaded with stones to increase weight on the blade when needed. Works just fine, too!

Dan and his father before him have been using Texaco products for over 20 years. Texaco Consignee R. M. Brown (right) supplies the farm with Texaco products, including Marfak. Marfak is preferred for lubricating bearings of farm machinery because it won't jar off, dry out or cake up, melt down or wash off. Mr. Curtiss has found that *it pays to farm with Texaco products.*



He likes Texaco's dependable delivery

H. B. Winslow (at right) farmer near Williamston, N. C., takes time out for a friendly chat with Melton Ayers, driver for the Robersonville Oil Company, Texaco Distributors.

"I like the dependable deliveries I get from the Robersonville people," he says. "When a farmer needs gasoline or oil, he wants it delivered on time."

Mr. Winslow farms 172 acres, raising tobacco, sweet potatoes, corn and peanuts. He has rigged up an attachment to his irrigating system so that the pump operates from the power take-off of his tractor.

This progressive farmer uses Texaco Fire Chief gasoline exclusively for his power machinery. He knows that Fire Chief's lively fire-power gives more draw-bar pull. Advanced Custom-Made Havoline Motor Oil is used for lubrication of the tractor, truck and other equipment. Mr. Winslow is another of the many thousands of farmers who know that *it pays to farm with Texaco products.*

BUY THE BEST...BUY TEXACO

TUNE IN: TEXACO HUNTLEY-BRINKLEY REPORT, MONDAY THROUGH FRIDAY, NBC-TV

A Page Written By Our Readers . . .

Chicago, Illinois

I want to take this opportunity to sincerely congratulate you, and your staff for your outstanding April-May 1960 issue of *The National FUTURE FARMER.*

We were especially pleased to note the many different items you had on farm safety. Your splendid editorial concerning farm safety and tractor accidents is excellent; and we wish to thank you for your interest in farm safety and your help in promoting this very important area of farm life.

Jim Messerschmitt
Rural Youth Specialist
National Safety Council

Moatsville, West Virginia

I have received *The National FUTURE FARMER* Magazine for two years now. It has helped me decide on agriculture as my future career. The stories the Magazine carries are very interesting as well as educational.

Curtis Poe

Brussels, Wisconsin

In the April-May issue, you had a very interesting article on a safe tractor campaign which I thought was very good.

Our chapter is interested in a program such as this. We would like to have more information as to the cost of this project and how to carry it out.

Anthony Dier
Secretary
Brussels FFA

Write to the Oelwein FFA Chapter, c/o Larry Tompkins, Advisor, Oelwein, Iowa—Ed.

Oak Grove, Louisiana

I would like to renew my subscription to the Magazine. It sets a good example for the boys who want to be farmers. It is something we should all be proud of.

Keep up the good work. I enjoy it very much.

Lester Fletcher

Kindred, North Dakota

I am a member of the Kindred FFA Chapter and receive *The National FUTURE FARMER* Magazine. I liked your article on "How to Study" in the April-May issue.

It is an interesting magazine and is really helpful in education.

Arland Olerud

Mechanicsville, Iowa

I have just received my first copy of *The National FUTURE FARMER.* I find the Magazine very, very interesting.

Fred Fisher

Enterprise, Oregon

Members of the Enterprise Chapter of Future Farmers certainly have enjoyed "*The National FUTURE FARMER.*" Various articles have inspired many of our members to work for higher goals.

We are so proud of our National Magazine that we gave gift subscriptions to some 20 businessmen, school board members, and honorary members. We hope to increase this number next year.

Chuck Williamson, Secretary
Don Elser, Advisor

Topeka, Kansas

Glad to see my article about farm books for farm youth in your April-May issue. Sorry you didn't use the little quotation in italics with the story's "lead" as it was necessary to tie-in with the opening sentences. Here it is: "Some books are to be tasted, some are to be eaten, but some are to be chewed and digested." Also, Phil Stong, not Strong, as you used it in the story was the author of "State Fair."

Gordon West

Grant, Nebraska

I was much interested in your listing of "The Nine Best Farm Books Ever Written" in my son's magazine for April-May but think you should correct an error in the list . . . Willa Cather, as you say, wrote several wonderful books on early days in Nebraska; however, she did *not* write "Old Jules."

This book is the work of another famous Nebraska woman, MARI SANDOZ, who grew up in the sandhill country of Western Nebraska. She gives a vivid picture of life on the prairies in several books, among her latest "The Cattleman" and "Cheyenne Autumn."

I think "Gone With The Wind" would have been a good addition to your list. It shows better than anything else I have read how drastically the agricultural picture can change in a few years . . . from riches to poverty. We have read and enjoyed several of the books listed, and will plan to read some of the others.

Mrs. Dorothy Keller

You are correct. Mari Sandoz did write "*Old Jules*" — not Willa Cather as credited by the author of the article. —Ed.

Fresno, California

I agree wholeheartedly with the three advisors' answers to the question "Is Vo-Ag Outdated?" in your "Here By the Owl" column of your April-May issue.

The "Careers in Agribusiness panel of the Agribusiness Committee of the Fresno County-City Chamber of Commerce has, and is, making this pitch to high school administrators, principals, students, and counselors throughout the central part of California. Of the 65 million people employed in the United States, 25 million are in Agribusiness, or 40% of the total employed 7 million in supply and services, 8 million in production, 10 million in processing and distribution. Agribusiness provides more jobs and careers in the city than on the farm—more jobs and careers than any other single industry in the United States.

Thus, a high school graduate, whether he continues his education or not, with a vo-ag education and background has a decided advantage in choosing his means of livelihood because of being inherently familiar with agribusiness problems.

David E. Verrue, Chairman
Agribusiness Committee
Fresno County-City Chamber
of Commerce

Fountain City, Tennessee

I especially like the article "Is Vo-Ag Out-Dated?" I thought it was one of the best articles in this edition.

Butch Lockett

Redfield, Iowa

I read through the April-May issue today. I read the article about "Rain! in 24 hours!" I am writing a report in chemistry and this article will help me. My report is about forecasting the weather.

Also, I agree with Herbert F. Brownlee who wanted monthly issues of *The National FUTURE FARMER.* Everyone in our FFA Chapter gets the Magazine and enjoys it very much.

Vernon Aldrich

Camby, Indiana

Your story called "Safari" was another example of your good work.

Joseph Donofrio

Bennett, Colorado

I would like to congratulate you on those wonderful articles published in the April-May issue: "Engines of The Future," "Can You Be a Vet?" "Agriculture's 'Helping Hands,'" and many others.

The Bennett FFA Chapter would be glad to see it come to their homes every month.

Ted Vetter

Americus, Georgia

I received the April-May issue and I think it is the best this year. I read nearly every article and each one was interesting.

James Gaston

Lake Andes, South Dakota

I received the April-May issue today and read most of the articles. I especially like "Agriculture's Helping Hands," "Can You Be a Vet?", and "The Nine Best Farm Books," I also enjoyed reading the story "I Like Farming."

All our members receive and enjoy the Magazine.

Lee Linnell

Soldier-Wac X-Ray Team

This free booklet shows you how . . . It's yours for the asking! A new 48-page booklet titled The Secret of Getting Ahead. Crammed with full-color illustrations, this free booklet shows you how to make your diploma pay off as a Graduate Specialist in today's Army!

Learn how to choose BEFORE enlistment. The Secret of Getting Ahead includes the complete Graduate Specialist story—all the facts about the Army educational program for high school graduates and seniors only. If you pass Graduate Specialist aptitude and physical tests, you'll choose the schooling you want before you enlist. (And in many technical fields, Army schooling ranks with the world's finest!) This valuable free booklet describes each of 107 Graduate Specialist courses: X-Ray Procedures, Guided Missile Electronics, Meteorology, Atomics, Radar & TV Repair, Machine Accounting—many more. Remember: Selected Graduate Specialist courses are also open to qualified young women.

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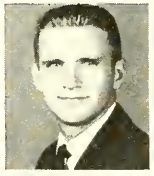
"Here by the Owl"

MR. ADVISOR . . .

Should I Buy Or Rent Land?



George W. Buchanan
Advisor, Frankfort, Kentucky

"There is no stock answer to the question, 'Should I buy or rent land?' The American farmer has traditionally set a goal of owning his own farm. Even though this goal is more difficult to reach today, it seems the majority of renting farmers still look toward the day when they will become landowners.

"The capital required to start farming on the typical Eastern Wisconsin dairy farm averages $40,000, or on the average hog-beef farm in the Corn Belt, approximately $66,000. Land and buildings represent three-fourths of this investment, with machinery, livestock, feed, seed and other operational needs making up the other one-fourth.

"It would seem advisable for a young man to accumulate a good start toward ownership of machinery and livestock through his supervised farming program in vocational agriculture while still in high school. For several years after graduating, it will probably be necessary for him to rent land while accumulating additional machinery and livestock along with capital for a down payment on a farm. In many cases a suitable father-son arrangement can be made for farming the home farm in partnership.

"The high capital investment plus the more complicated practices used in production make it necessary for the farm owner to have experience in operating a farm. Managerial experience gained through his supervised farming program and additional training through young farmer classes enables a young man to become better prepared to turn his capital into a profitable return. Working as a farm laborer usually will not provide the experience or capital to become a successful farmer.

"Many agricultural economists say that there is no 'best time' to buy a farm. This is based on the theory that the availability of farms is limited and will be placed on the market only a few times during a young man's life, and this should be considered; however, since the return on all capital invested in farming is only 3.5 percent at present, there is added encouragement for renting and postponing purchase."

Donald Kabler
Advisor, Corvallis, Oregon

"This question has probably been thrown at vo-ag teachers more than any other by boys who have definitely decided to go into production of livestock and crops. The young men asking the question deserve a well-thought-out answer.

"This is one indication that maturity and management are getting closer together and the young man is thinking in terms, not of a particular project, but of the problems between the present and his goals in the future.

"Weighing all matters of management, initial investment of machinery and livestock, facilities for expansion, and actual growing of the agricultural product, I would advise a boy to start renting during his high school days. It is desirable in the end to own.

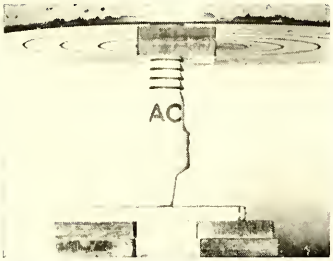
"Many successful farmers over the nation, however, are tenant farmers. Some manage large holdings for business people away from agriculture. Some successful farmers buy when young, hit the crop cycles and marketing problems correctly and eventually pay off. Others are fortunate in having land handed down through family lines, whereby they receive a challenge to do something with what they have been trusted with.

"If a boy is ready to enter the profession of farming after getting out of high school, renting is probably the best way to ownership. Even though our farms are getting bigger and being manned by fewer farmers, there seem to be plenty of men willing to let their farms and holdings be worked by

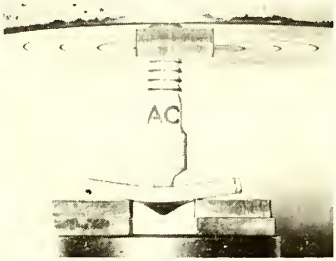
(Continued on page 14)

Piercing Proof of Quality!

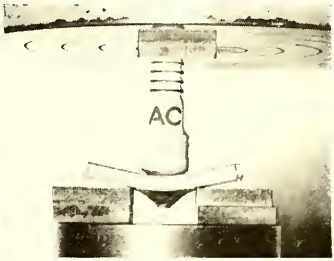
This picture sequence shows the incredible toughness of AC's exclusive "Hot Tip" Spark Plug insulator



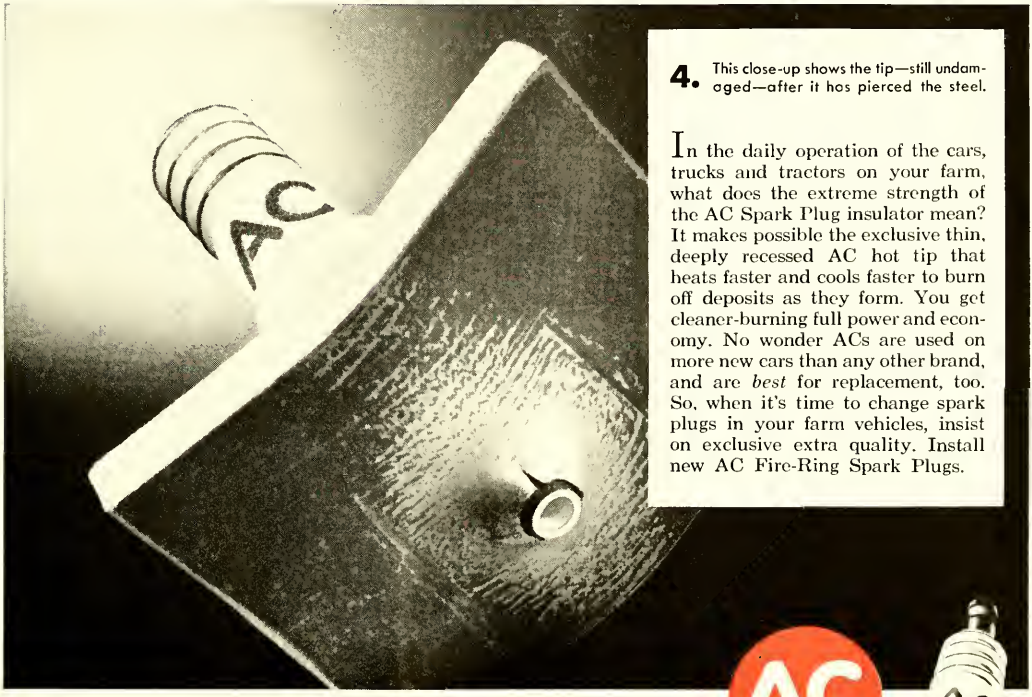
1. Under extreme pressure, the tip is forced down upon a heavy steel plate.



2. The heavy steel plate starts to bend as additional pressure is applied.



3. The thin, tapered AC insulator tip slices through the steel.



4. This close-up shows the tip—still undamaged—after it has pierced the steel.

In the daily operation of the cars, trucks and tractors on your farm, what does the extreme strength of the AC Spark Plug insulator mean? It makes possible the exclusive thin, deeply recessed AC hot tip that heats faster and cools faster to burn off deposits as they form. You get cleaner-burning full power and economy. No wonder ACs are used on more new cars than any other brand, and are *best* for replacement, too. So, when it's time to change spark plugs in your farm vehicles, insist on exclusive extra quality. Install new AC Fire-Ring Spark Plugs.

They must be the best!

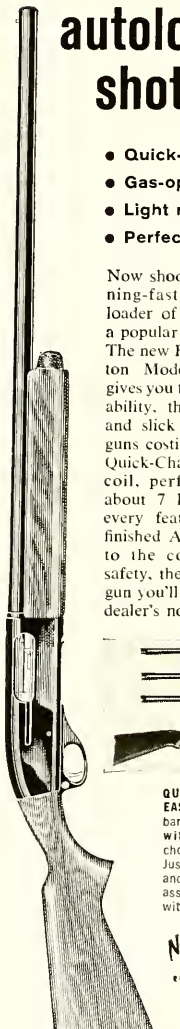
New AC Fire-Ring Spark Plugs

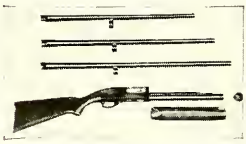
AC SPARK PLUG THE ELECTRONICS DIVISION OF GENERAL MOTORS

World's greatest value in a featherweight autoloading shotgun

- Quick-Change Barrels
- Gas-operated
- Light recoil
- Perfect balance

Now shooters can have a lightning-fast, gas-operated autoloader of Remington quality at a popular price...only $109.95*. The new Featherweight Remington Model 878 "Automaster" gives you the same super-dependability, the same fast pointing and slick operating features as guns costing much more. It has Quick-Change Barrels, light recoil, perfect balance, weighs about 7 lbs. In every way in every feature, from the finely finished American walnut stock to the convenient cross-bolt safety, the Model 878 is a shotgun you'll want to own. At your dealer's now.





QUICK-CHANGE BARRELS — EASY TAKE-DOWN. Model 878 barrels are interchangeable **without tools** for desired choke and barrel length . . . Just unscrew magazine cap and lift off the barrel. Trigger assembly comes out as a unit with the removal of 2 pins.

New **MODEL 878 "AUTOMASTER" 12 GAUGE**

$114.95*

*Price subject to change without notice.

"Automaster" is a trademark of Remington Arms Company, Inc.

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Remington Arms Company, Inc., Bridgeport 2, Conn. In Canada: Remington Arms of Canada Lim-36 Queen Elizabeth Blvd., Toronto, Ont.

"Here by the Owl"—Continued from page 12

young farmers who are well-trained and willing to put into practice those things they have learned in high school vo-ag classes and other institutions of learning.

"I like to tell the success story of a young farmer in this community who now rents extensively and has been doing so since he was in high school. He runs and operates about 2,000 acres of land devoted to grass seed production and special legume crops. Because of good management, ambition, and just a little luck, he now owns several hundred acres of his own and has a $50,000 inventory of machinery.

"There are many farmers and others in the area who are willing to turn over to him all the land he can handle on a rented basis because he has proven himself capable of managing a large business in agriculture. Rented land has been the answer for this young man, others have had similar experiences; therefore, my answer, rent before you buy."

James E. Hamilton
Advisor, Audubon, Iowa

"The goal of most young farmers is to own their own farm some day. In discussing which is better when starting to farm, those who say to buy as soon as possible, usually point to these advantages: (1) All improvements that are made are to the owner's advantage; (2) an owner is independent and can make changes in cropping plans, buildings, etc.; (3) an owner can realize higher income because all he produces is his; (4) an owner realizes additional profits in periods of increasing land prices; and (5) an owner can enjoy the security, pride, and satisfaction that comes with ownership.

"Those that say renting is better for the beginner usually stress the following advantages: (1) All of your capital can be invested in livestock or crop production so a larger volume of business can be developed; (2) the ease of moving if a farm is found to be unproductive; (3) the small amount of capital required to rent as compared to buying; (4) the landlord's interest and good advice on management that usually comes with renting; (5) the risks are less, particularly during declining farm price periods; (6) as a trial period a young farmer who decides he has made an unwise choice in his career can sell out with less loss that if he owned his farm; and (7) it is frequently the only way a young farmer can start farming.

"This is true in actual practice since most beginning farmers do not have enough funds to finance both the downpayment on a farm and the cost of a year's operation. There are beginning farmers who had enough and they bought and are farming profitably. There are other young farmers who sold their small farms in order to finance larger operations on rented farms.

"The possible profits from a small farm which is owned should be compared with the possible profits from a larger rented farm. The final answer may be decided by the goals of the farm family. Perhaps for many the value of ownership is greater than profits and average yearly income.

"However, the young farmer needs to know his abilities and study his own situation. Your FFA advisor, your parents, and banker can help resolve your decision to buy or rent farm land."

Cartoon Contest Winners

HERE ARE the winners of the **Cartoon Caption Contest** which appeared in the April-May issue. In some cases more than one reader sent in the same caption; so the judges picked the ones with the earliest postmark.

First Prize, $15

"See"—Bobby Welch, Timmonsville, South Carolina

Second Prize, $10

"Ask him"—Wayne Couvillion, Simmesport, Louisiana

Third Prize, $5

"This situation requires cool judgment" — Gerald Kohlbeck, Stratford, Wisconsin

Honorable Mention, binders for copies of *The National FUTURE FARMER*

"Show 'em at their best!"—Marynell Powell, Auburndale, Florida

"Starts Right Now!"—Jim Tomlinson, Bondurant, Iowa

"My dad's the greatest"—Larry D. Duke, Cedartown, Georgia

"Let us help" — Donald Carver, Slaughters, Kentucky

"From dream to exciting reality"—Tony Penrod, Lilbourn, Missouri

"Check in here"—Paul Wolgemuth, Jr., Elizabethtown, Pennsylvania

"Now"—Larry Mayhew, Gretna, Virginia

"Suspension"—Ted Skolberg, Hector, Minnesota

The **Businessman** in the **Blue Denim Suit** is today's profit-conscious farmer. He relies on Master Mix for help in his planning, production, marketing...his entire business.

McMillen Feed Mills, Fort Wayne, Indiana

MASTER MIX FEEDS

new star of the
"WESTERN LOOK"

Lee WESTERNER
as worn by
GUY WEEKS, champion rodeo cowboy

Fast becoming a favorite on any scene, for those who like the Western look—THE NEW LEE WESTERNERS.

Pants are slim-line...sleek and comfortable—cut over famous LEE RIDER patterns. Jacket is form-fitting and full-shouldered for the real outdoors-man.

Westerner's fabric is LEE WESTWEAVE...sturdy, hard-wearing material in Sanforized, polished cotton that's guaranteed all the way.

Jacket $5.95 Pants $4.95

Lee Westerners are real popular! If your store doesn't have your size at the moment, ask for a special order.

THE H. D. LEE CO.
GENERAL OFFICES
117 W. 20th ST., KANSAS CITY 41, MO.

Mr. Lee Larson served as guide on tour of Process Development Lab at General Motors Technical Center.

You Were There!

THE NATIONAL OFFICERS representing all 380,000 Future Farmers of America put the FFA on display during the annual FFA Goodwill Tour.

The 1960 tour took the FFA to 17 cities including Baltimore, Boston, New York, Detroit, Toronto (Canada), Chicago, and St. Louis. Leaders in business and industry were host to the visiting officers as they told the vocational agriculture and Future Farmers of America story.

In return, the national officers learned that businesses and industries associated with the nation's agricultural development are interested in the Future Farmers of America. Mr. Clark W. Davis of the Du Pont Company told the National Officers, "Your visits to industry help to strengthen friendship between the business community and the new generation of farm people."

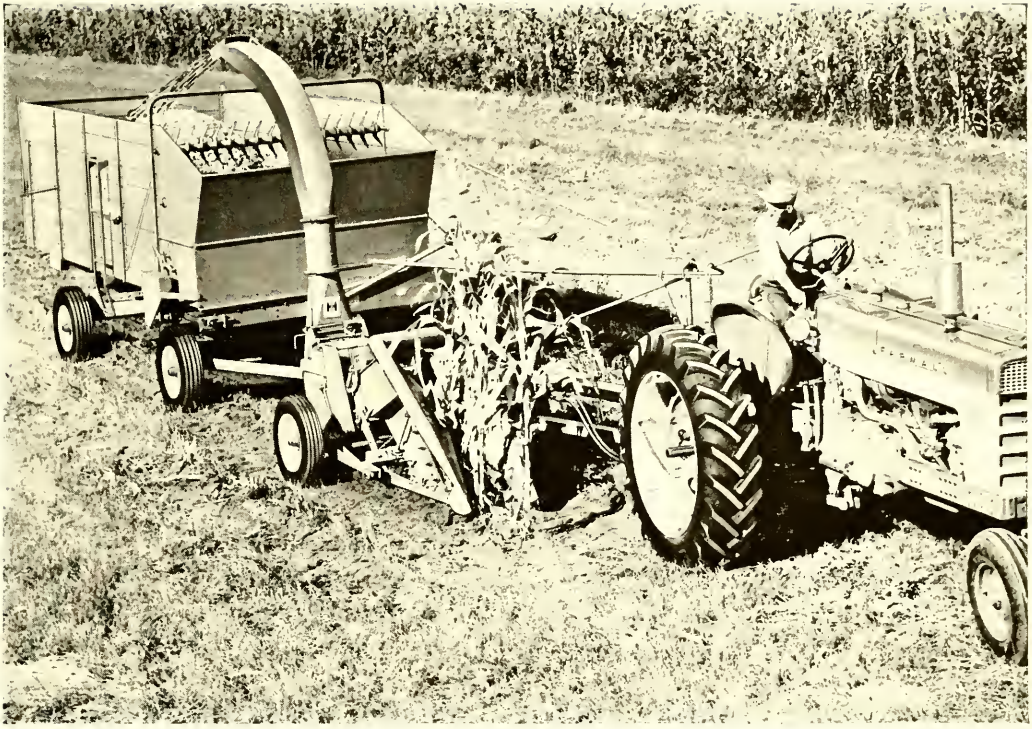
National FFA President, Jim Thomas, summed up his views of the Goodwill Tour as follows: "The Goodwill Tour greatly benefits the individual Future Farmer in one dynamic way. The tour gives a great many people of rather important decisions a greater understanding and appreciation of what every Future Farmer is doing in his vocational agriculture classroom, on his farming program, and in his FFA activities. From this comes their support and interest in each of us because to them we represent the future in agriculture."

Four presidents have informal chat. (l. to r.) President of Du Pont, Mr. Crawford Greenewalt; Jim Thomas; Carl Vincent, Delaware state president; Mr. A. E. Forster, Hercules Mfg. Co.

First stop was visit with president of Black & Decker Mfg., Robert D. Black.

Wirthmore Feeds, Inc. officials took officers on tour of research center.

During visit to Du Pont laboratories officers wore required eye shields.

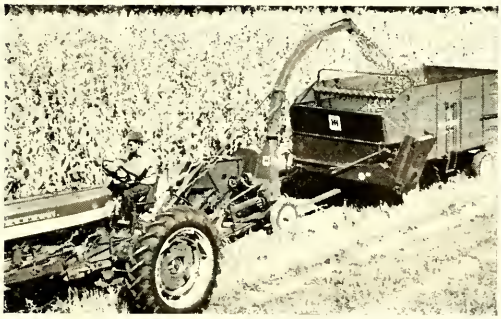


Chops with the biggest...priced with the lowest!

McCormick® No. 15 owners report amazing 40-ton-an-hour chopping in heavy corn!

The low-cost No. 15 has proved it can chop 30 tons an hour in hay . . . 40 tons of silage in heavy corn! And it doesn't take much figuring to show that the McCormick No. 15 gives you a big 60% bonus in chopping power over any other rig of the same price . . . actually outdoes several well-known choppers costing $1,000 more!

With its 6-knife, lawn-mower-type cutter head, the rugged No. 15 slices the crop 6,000 times every minute.



King of all flywheel-type field harvesters—McCormick No. 36! It eats through heavy corn at a 45-ton-an-hour pace . . . chops 35 tons of gross silage in only 60 minutes! Crop is force-fed into heavyweight, 44-inch-diameter cutter head, then chopped with tremendous slice-through power. Quick-mounted 72-inch cutter bar, row unit, and hay pickup equip it for any crop.

You can feed it with any of three quick-change harvesting units: (1) row-crop unit, (2) 60-inch cutter bar, (3) 54-inch hay pickup. Each unit is designed to force-feed cutter head at big-tonnage rates. New 9-knife cutter head for the No. 15 gives you 50% more chopping power . . . lets you drive faster in light crops.

If your tractor is 2-3-plow size or bigger, you're all set to chop corn or hay silage with the husky, low-cost McCormick No. 15.

Try it! Find out for yourself that a McCormick chopper that's priced with the lowest can chop with the biggest!

See your IH dealer for chopper demonstration! Ask him to bring a McCormick field harvester to your farm. Find out how you can finish sooner, at less cost with McCormick forage equipment. Ask about the Income Purchase Plan which enables you to buy as you need, pay as you profit. Stop in today!

Match your payments to your income

INCOME PURCHASE PLAN · PAY AS YOU FARM ·

See your INTERNATIONAL HARVESTER dealer

International Harvester Products *pay for themselves in use* — Farm Tractors and Equipment Twine . . . Industrial Tractors . . . Motor Trucks . . . Construction Equipment—General Offices, Chicago 1, Illinois.

Mass dynamometer tests again show borderline spark plugs wasting power and gas!

Farmers at Lyndon, Ill., found they were being "short-changed" by borderline spark plugs! They thought their plugs didn't need replacing. But 19 of 20 tractors tested had "borderline" plugs—plugs that sounded all right yet were wasting pulling-power and gas!

The Lyndon tests back up what we've found to be true in previous tests across the country: in every case, farmers thought they didn't need to replace plugs until they *noticed* misfiring. But the tests proved to them that spark plugs waste power, gas and money *before* misfiring is noticed.

Don't you be "short-changed" by *borderline* spark plugs that "*sound*" all right. Keep your engines at full power and economy by installing new Champion spark plugs *regularly*—every 250 hours in tractors, every 10,000 miles in cars and trucks.

Farmer Frank Hiland said: "I've just been changing plugs at the beginning of the season. And I know now I've lost a lot of money on wasted power and gas! See my old plugs?—488 hours on them! That's a lot of dollars burned up." Mr. Hiland's tractor added 2 horsepower and his gas economy increased 8%.

Farmer Gerald Rummel said: "You've got to hold horsepower up to par. The test showed me how replacing plugs at 250 hours will do that. Otherwise, you gradually lose power and economy as plugs begin wearing out—even though they may sound okay." His increases: horsepower, 34 to 36; gas economy, 12%.

EVERY MAJOR U.S. TRACTOR MAKER USES CHAMPION SPARK PLUGS

Tractors fresh off the farms rolled into the Harry Fisk Co., John Deere dealer at Lyndon, Ill., for dynamometer tests. Horsepower and gas consumption were logged *before* and *after* installation of new spark plugs—no other adjustments.

Mr. Lauren Matthews, owner of the tractor being tested above, said: "I realize now that plugs should be changed at 250 hours to keep horsepower at its peak and to save gas. I pull a three-bottom plow. Pulling-power and gas economy are mighty important!"

Mr. Matthews' remark was typical. Farmers who thought their plugs didn't need replacing felt otherwise when they saw test results. One result: replacing their *borderline* plugs with new Champions saved them over 8¢ on every gasoline dollar!

DEPENDABLE
CHAMPION
SPARK PLUGS

Farmer Victor Nelson said: "I had 492 hours on my plugs. I didn't realize how much gas and power I was wasting. And with peak horsepower, I can do more work in less time and save gas that way, too!" With new Champions, Mr. Nelson's horsepower increased from 39 to 42.5; fuel economy improved 13%.

Farmer Marvin Zaagman said: "I changed spark plugs seasonally . . . I figured, 'the plugs *sound* all right, why throw away a good set?' I didn't know plugs could sound okay and be 'borderline'—wasting all that power and gas!" Mr. Zaagman's horsepower increase: 1½ hp. Gas economy up 6.6%.

CHAMPION SPARK PLUG COMPANY • TOLEDO 1, OHIO

farming full time

Don looks to the future with confidence, both in himself and farming.

By Wilson Carnes

"I PLAN to be a farmer like my Dad." With these words, 11-year-old Don Bridges of Dawson, Georgia, stated his life's goal. Now, ten years later, he is fast realizing that ambition and setting a pace many farmers several years his senior would find difficult to follow.

Young Don's first show calf had just been named tops in its class at the county fair when he made the above remark to a newspaper reporter. He now owns and operates a 502-acre farm and rents another 600 acres. And last fall, he was named Star Farmer of the Southern Region at the National FFA Convention.

Don enrolled in vocational agriculture at Terrell County High School in 1952. His first farm enterprises were five hogs, one-half acre of sweet potatoes, and three acres of winter grazing. In the years following, Don increased his farming enterprises until today his gross investment in land, buildings, livestock, and machinery amounts to more than $61,000.

By the time Don finished high school, he had earned over $4,000 from his supervised farming program. Ten acres of cotton, 16 acres of corn, 16 acres of peanuts, and truck crops had been added to his vo-ag projects. He had increased his livestock, exhibited more, and become a familiar figure at both county and state shows. At a show in Dawson in 1955, his Herefords were named both champion and reserve champion steers, and his Angus was judged best in the show. Both Angus and Hereford breeders awarded him a calf of their respective breeds.

Don raises 550 acres of corn. He became a member of the 100-bushel corn club while in high school.

The fall following Don's high school graduation was a trying one for him. He was pulled between the decision of pleasing his parents by attending college, or of pleasing himself and going directly into fulltime farming. His mother wanted him to be a doctor. Finally he agreed to enroll in Abraham Baldwin Agricultural College at Tifton. Two quarters later, and dissatisfied in college, his parents agreed for him to quit school and return to farming.

Like most farmers, Don felt the urge to own his own land. In the fall of 1957, he found a 300-acre farm and purchased it making a cash payment of $7,125 and assuming a mortgage of $10,875.

The following fall, he purchased another farm of 202 acres which joined his. He paid $10,000 in cash and assumed a mortgage of $10,000.

Don says it would have been impossible to purchase the two farms without the help of his Dad and the local bank. Mr. J. E. King, president of the Bank of Terrell says, "We don't think we have a better farm risk as we have the utmost confidence in his ability and integrity." The mortgages on his farms are held by two insurance companies.

Don's father has helped in other ways, too. When Don started farming fulltime, Mr. Bridges gave him a tractor. He has also loaned equipment when Don needed it and is always available for counsel and advice. However, Don explains, "He insists that the final decision must be mine."

Dr. Billy Martin of Dawson admired Don's farming ability. He asked Don

Don's beef herd numbers 33 head. With him on a routine check is J. F. Downer, his former vocational agriculture teacher who is now Terrell County High School principal.

if he would like to rent his 600 acre farm on a 50-50 basis. Dr. Martin would furnish the land, all permanent equipment, seeds, fertilizers, and insecticides; Don would furnish the labor, management, tools, and equipment. Aware of his heavy debt, Don decided this would provide the extra money to pay it off. He took the offer.

With the 600 acres he rents plus his own farm, Don now has 846 acres in cultivation. Of this, 145 acres are planted in cotton, 135 acres in peanuts, 550 acres in corn, and 66 acres in pasture. He has about 22 head of hogs and 33 head of beef cattle.

Don's farm work didn't prevent him from participating in several FFA activities. He served his chapter as treasurer and vice president. Each year he entered the public speaking contest and one year won second place in the district. He was chapter winner of both cotton and corn production awards; and under his chairmanship, the earnings and savings committee raised $800 in one year to finance chapter activities. He was also chairman of the community service committee.

As a junior, Don was chosen the most outstanding FFA member and awarded a trip to the National FFA Convention. He attended the National Convention a second time when the Terrell County livestock judging team represented Georgia; and brought back silver and bronze emblems for his individual judging. In fact, Don learned how to grade livestock in his vo-ag classes so well that he is now recognized as an official grader for the local auction market. He has earned nearly $3,000 in the past three years in this job. In his senior year, he was selected Star Chapter Farmer.

Don has put to good use the knowledge he learned in his vocational agriculture classes. He gives a great deal of credit for his success to his teacher of vocational agriculture, H. H. Carlan and his former teacher, J. F. Downer. He also points out that it would not have been possible without the cooperation and encouragement of his parents, Mr. and Mrs. C. B. Bridges.

While a student, Don lettered three years in football and track and also served as co-captain of the track team. He is active in church affairs and has been a member of the Farm Bureau for three years.

Don's partner since February of 1959 has been his wife Juanita. They moved into a tenant house on Don's farm and remodeled it into an attractive home. The house has a den-kitchen combination, a living room and three bedrooms plus one bath. The floors were sanded and refinished, and the walls painted. The outside of the house is covered with white asbestos siding. The grounds have been landscaped and the lawn sodded. Don and his father did most of the work, with some help from farm hands.

Juanita is helping her husband get established in farming by working as a receptionist-bookkeeper for a doctor in Dawson.

When asked how he felt about his Star Farmer Award, Don replied, "I feel I am a mighty lucky boy!"

Advisor H. H. Carlan makes a point on peanut production during a supervised farming visit to Don's farm.

The major part of Don's farm income comes from cotton, peanuts, and corn. He's shown cultivating cotton, below.

Don and Juanita were married in February, 1959 and moved into a tenant house which had been completely remodeled.

Photos by Alton Ice

Top Hogs In 5½ Months

By Joe D. Boyd

Harkey and Pluenneke, left, talk hogs with The National FUTURE FARMER's J. Boyd, center, at a Mason cafe table.

Hog farmers on the range! That's what they're calling these former Future Farmers.

CHARLES Pluenneke and J. D. Harkey never worry about selling their hogs. On any given hour of any day in the week, they can sell a truckload by picking up the telephone. And they get top prices.

It's usually a "no questions asked" proposition. In just three years, these former Mason, Texas, Future Farmers have built a reputation for quality hogs that buyers just don't question. Maybe that's stretching things a bit! Twenty-six-year-old Harkey says there *is* sometimes a quick inspection when buyers come to their farm. And there's always *one* question—"How many head can you let us have?"

Mason ranchers snorted a little when Pluenneke and Harkey started talking about hogs in cattle country. But bankers didn't balk when the Texans inked a 1957 partnership agreement. Still, it sounded strange enough that I wanted to see their 800-hog operation.

"Everything was done on credit," they told me. "We had nothing given to us and we haven't inherited a dime. It's been strictly business with us."

Right off, they started talking markets. Seems these partners completely ignore the traditional highs and lows of the hog market. They just try to produce top quality slaughter hogs. When there's a batch of market weight animals, they sell—regardless of the season or going price. Pluenneke and Harkey figure their prices average out OK.

Marketing is incredibly simple for them. They can sell:

1. **In the auction ring**
2. **Direct to packer**
3. **To packer representatives.**

Either of the last two market outlets takes only a phone call. The buyers *come to them*—eliminating hauling charges or commissions.

"It's worked better than we hoped," Harkey declares. "We spend our spare time on feeding and breeding improvement, since we don't have to worry about markets."

You see mostly Duroes on the Pluenneke-Harkey farm now. But it's changing. Already there are some crosses with Hampshire and Yorkshire. They plan to settle on a York-Hamp cross.

Bred sows get two to four pounds of ground milo and a half pound of pelleted supplement plus daily pasture. Mason ag teacher George Garretson helped them choose milo over corn. "It's cheaper," they say, "and when supplemented with alfalfa leaf meal, is just as good."

You don't see any troughs or self-feeders either. The young hogmen discarded them long ago. Now they just *scatter* feed over *hard spots* in the flat, dry rangeland. It cuts fighting injuries and labor costs.

A week before farrowing, sows are moved into 8 x 10-foot stalls with 8 x 8 sun-porches. Sheet iron guards and concrete rails prevent nose-rubbing. "Next best thing to isolation," Harkey grins. In stalls, the sows get a four pound daily bran-and-shorts mixture.

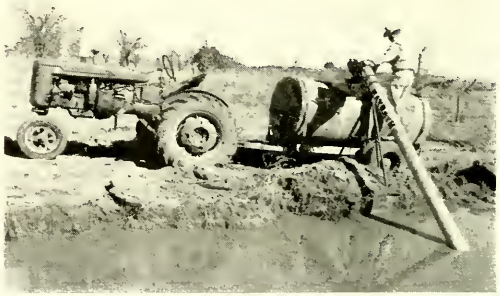
Pluenneke and Harkey learned some things the hard way. They found young pigs hard to get on feed. Even at six weeks, the shock of weaning was hard to overcome. Early creep feeding was their answer—pigs go on starter ration at seven days.

It's about a half mile from the farrowing house to the feeder parlor. Feeders are "graduated" through four sections in the parlor according to individual performance. Weaners go to section one and stay there on a 16 percent protein, completely balanced ration until they reach 50 pounds. Section two hogs range up to 75 pounds

(Continued on Page 41)

Zavalla hoses the concrete floors, pushes manure to the drainage ditch. It's gravity-fed to lagoon by tile pipe.

Harkey pumps a tank of "liquid manure" to be distributed on their 107-acre pasture of oats, Sudan, sorghum almum.



USDA Photo

modernize your feeding

YOU CAN'T make 1960-style profits with 1950 feeding methods. Fast moving feed research is bringing rapid changes to the feedlot, dairy barn, and hog pen. Here's a look at some late trends.

Roy Arsdall, USDA economist at the University of Illinois, says beef cattlemen who handle 50 to 250 animals a year will probably find mechanical bunk feeders fairly inexpensive. He tested baskets, wagons, self-unloading wagons, and mechanical bunk feeders for delivering grain and silage to cattle. Self-unloading wagons were cheapest for handling 300 or more, *saving six to seven cents per ton of feed in 700 to 800-head operations*—based on $1.00 an hour labor.

With over half of today's manufactured feeds being pelleted, crumbled, or cubed, you can count on hearing more about these processes. Pelleting is probably the hottest topic of the day. Why? Pelleting has the obvious advantage of reducing storage space and handling labor. But L. D. Kamstra of South Dakota State College's agricultural experiment station says it also *increases feed intake, improves feed efficiency, and gives better gains.*

One thing still isn't clear to feed researchers: Why does pelleting increase digestibility of roughage rations? Whatever the reason, this peculiar fact offers a bonanza to cattlemen. It means possibly *increasing the feed value of poor quality roughage!* But Dr. Kendall Dolge, researcher for Wirthmore Feeds, warns against considering pelleting a panacea for all feeding problems. "Pelleting swine rations will increase gain and feed efficiency over the same feed in mash form," he says, "but it does have limitations."

Pelleting could re-write some dairy feeding rules, too. Dr. Roger Hemken of the University of Maryland believes it may be profitable to raise growing heifers with *pelleted hays and less grain than is now recommended*—if pelleting can be done cheaply enough.

Hemken says pelleted hay increased both daily gain and height of dairy heifers in tests completed this year. He fed one group of six to twelve months old heifers a poor quality of timothy hay. Another group got high quality alfalfa hay. *Average daily gain was upped about .6 of a pound due to pelleting*—in both groups. The gain is easily explained: Cows simply ate more of the pelleted hay.

Can you visualize a completely automatic feeding system for dairy cattle? That's the job cut out for Dairy Scientist K. E. Harshbarger at the University of Illinois. He's interested because mechanization of dairy feeding has lagged behind labor-saving advances for milking, barn cleaning, and milk transportation.

It isn't hard to see why progress has been slow in automatic dairy feeding. Most producers prefer feeding each cow according to production. But Illinois researchers aren't convinced that feeding by production should call for time-consuming individual attention. They've already found that self-feeding will work if cows get a constant roughage level with *grain feeding adjusted to production average of a group with similar milk yields.*

Harshbarger says their automatic equipment will mix and transport grain and roughage to the feedlot. It's a revolving floor mat and auger machine which delivers a 15 percent concentrate-85 percent roughage ration to one group and a 25 percent concentrate-75 percent roughage ration to another. Later, Harshbarger plans to divide cows into four production groups labeled very high, high, medium, and low. Groups will be graduated through these four lots according to production. Future tests will have remote switches placed in bunks to keep feed available at all times.

Automation pays in the hog business, too. Former Las Cruces, New Mexico, Future Farmer Laurence Brown has installed bulk feeding equipment which slices three cents a pound from his marketing costs.

Grain is augered from a truck into a storage section of his farrowing house. From there it's augered to a wooden bin outside, where it's gravity-fed into a grinder and blown into a metal five-ton bin. Brown mixes feed once a week. He hand-mixes supplements to the ground grain as it's augered from the metal bin to a mixing cart, powered by a tractor. *That's the only hand labor in the entire system.* Augers take over to transport feed from cart to feeding boxes in the hog pens. His marketing costs have dropped from 14 to 11 cents a pound.

Feed research is on the move. There's only one way to make a profit—by keeping up with progress.

These Arizona Future Farmers work year 'round to emphasize farm safety.

WHAT DOES it take to be named a winner in FFA's Farm Safety Contest? The 54 members of the Amphitheater FFA Chapter of Tucson, Arizona, have the answer. Their Chapter was named National Winner in 1959.

Safety Committee Chairman Tom Russell says, "We felt a good safety program should be based on the major needs of our community. We set our goal to make each member of every family safety conscious while at home, at work, at school, at play, and on the highway."

The Amphitheater Chapter seized the opportunity to push their safety program into full swing during Farm Safety Week. Invitations were sent to FFA members, prospective members, their parents, school personnel, and others interested to attend an open house and observe a safety and fire fighting demonstration. The response was excellent.

When school began in the fall, members chose their safety slogan for the year: "Safety, the Sign for '59." Four thousand stickers with this safety slogan were printed and distributed throughout the Tucson community and the state. Two thousand safety seals bearing their slogan were printed and used on all correspondence leaving the vocational agriculture department.

Safety check sheets were used in conducting farm safety surveys and 735 red skull and cross bone tags were attached to farm and home safety hazards.

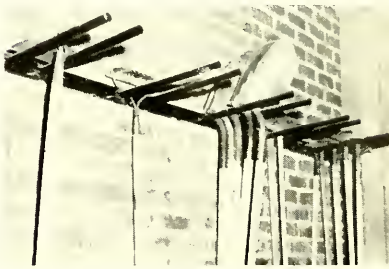
This live-wire FFA Chapter sponsored a school safety assembly, bus safety posters, radio and TV shows with safety as their theme, and also conducted a safety check on all bicycles in the Amphitheater School District.

A number of large roadside signs with the Chapter's slogan were erected in the community. In addition, parent-son driving pledges were signed by all chapter members of driving age. All members with cars checked them for faulty brakes and tail lights; and "Drive Slowly" signs were placed at the entrance to several farm homes.

During the year, numerous movies were shown emphasizing safe farm practices, including correct methods of fueling farm machinery and storing of flammable materials. Strict safety rules were followed in the farm shop at all times.

These highlights give some indication of the safety work of Future Farmers at Amphitheater. They had a very detailed program which left few stones unturned in their drive for safety in their community.

Amphitheater Advisor William F. Hendrix says, "A good safety program is never complete. Chapter members realize the effort must be a continuous one. We know the most important contribution we can make to the safety of our families, friends, and community is to recognize our individual responsibilities."



Chapter members made tool racks for the vo-ag shop to prevent injuries.

Amphitheater Chapter members inspected bicycles at elementary school and "ticketed" those with safety hazards.

Harold Callaghan and Safety Chairman Tom Russell, right, explain school bus safety to crowd of elementary students.

FARMING without SOIL

By R. W. Skulski

SINCE Sputnik I, scientists have turned with new interest to *Hydroponics*—the science of growing plants without soil. Here may lie the means of providing fresh vegetables for the inhabitants of a moon base or the long range space traveler of tomorrow. You, too, can learn the fundamentals of plant nutrition and how to influence growth, with a simple yet fascinating soil-less garden.

Soil is not necessary for growing plants, but only certain chemicals found in it. When these chemicals are provided, no dirt is necessary. To start, you will need some salts, water, sand, a spirit of adventure, and a desire to learn how to better control the growth of plants.

Water

Plants receive nourishment by absorbing water from the ground in which certain chemicals have naturally dissolved. Follow nature's example and begin with water. Rain water is best because it has few dissolved chemicals in it. You do not want to carefully measure out a desired chemical and add it to water which may already have it; or perhaps elements you do not want at all. A barrel under the down spout will supply ample water of good purity.

Chemicals

The next step is to mix a nutrient solution. Over the years analyses of different soils and plants have yielded a list of essential elements for growth. These are nitrogen, potassium, phosphorus, magnesium, and calcium. Plants grow best with their own proportions of these elements. Fortunately, a good average mixture for most plants can be made to start (see table on this page). Variations of this mixture for individual types of plants can be tried and will produce a variety of interesting results.

These chemicals can be obtained at your local drugstore. Very small quantities of manganese sulphate and boric acid have been found helpful to plant growth; however, for your first try at soil-less gardening let's leave them out. Later you can experiment by adding one or both of them. Your chemicals may be mixed dry and dissolved in a little hot water. When completely dissolved, this concentrated solution is added to enough cool water to make the required 4½ gallons.

Sand

No less important is the medium in which the plants are to grow. Sand provides sufficient support, holds the nutrient solution long enough for roots to absorb it, and is inexpensive. Although plants may be grown directly in a solution, special pains must be taken to support them. It is easier to begin with a simple sand garden.

Here, as with the water, make sure the sand is reasonably pure. Most sand will contain some dissolvable material. It must, therefore, be washed and soaked thoroughly with rain water. Keep rinsing until the water draining off is perfectly clear. Then soak in rain water for several days with occasional stirring to dissolve the more slowly dissolving elements. Hot water will help. What we desire is a neutral bed of pure silica which will offer root support and no more.

Next, you need the proper grade of sand—neither too fine nor too coarse. Coarse sand will not keep the solution around the roots long enough. Very fine sand will do this too well, so that when fresh nourishment is provided, you will be unable to wash away the old. For a simple test, fill a flower pot with the sand and pour water on it in a steady stream. If the water drains away quickly with only momentary puddles, your sand is all right. Add a little fine sand if too coarse, or some small pebbles if too fine.

Beds

The next step is to provide a suitable bed. Flower pots, cans, wooden or metal boxes, baking pans, or what have you can be used. Only three requirements must be met. First, there must be free drainage so that beds will not flood. Several small holes or slits covered with patches of screen will do. For a large outdoor bed, particular pains must be taken to insure good drainage.

Second, the container must not corrode. Stay with earthenware, wood, or aluminum, or else coat all surfaces in contact with the sand with an asphalt base paint.

Third, provide enough depth for the root system to grow. You cannot grow carrots in a shallow cake pan.

Fill the container with sand, smooth to within an inch of the top, and test for drainage. The simplest way to feed is to pour the solution directly onto the sand. The tendency is to feed too often. If the sand feels moist when you rub it against your thumb and finger, do not feed. If dry, pour on solution until it runs out the drain holes. Different plants, different seasons, and different growth periods will influence the feeding frequency. Carnations in winter may go three weeks without feeding, while tomato seedlings in summer may need water twice a day. Vary the feeding according to plants' requirements. Watch carefully, use your own judgment, and let nature be your guide.

One final point on feeding. Since plants do not use up the chemicals in the same proportion that they were

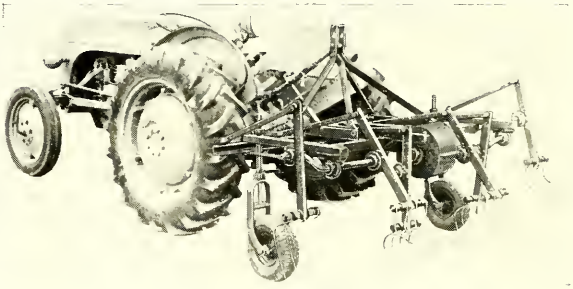
(Continued on Page 56)

Nutrient Solution Formula for 4½ gallons of water:

Potassium Nitrate	**1 oz. or 2 tablespoons**
Monocalcium Phosphate	**½ oz. or 1 tablespoon**
Magnesium Sulphate (Epsom Salts)	**¾ oz. or 1½ tablespoons**
Ferrous Sulphate	**⅛ oz. or 1 teaspoon**

They grow CENTURY PLANTS on Mexico's Rancho Jabali. Cowhands cut away the leaves, remove the plant's heart. It's high in carbohydrates and is part of their yearling feed.

Fuerst Brothers' HAY TEDDER is said to feature "feather light action" in lifting and fluffing hay for faster curing with less leaf loss. Can use with hay conditioners.



something new

Tractor-drawn fencer by U. S. Steel drives posts without digging holes. Feeds woven wire or up to five strands of barbed wire. Is said to double capacity of a 2-man crew.

Allis-Chalmers' experimental P-91 crawler tractor gets power from a Boeing gas turbine engine. Though still in experimental stage, it may represent tomorrow's crawler.

Automotive Industries makes this steel cab for any Model 601, 801, or 1801 Ford tractor. Available in solid steel or Skylite roof. Windshield wiper is optional equipment.

Vissers Corporation markets ACROBAT which handles straw, hay, or green chop. Rakes up to eight feet, spreads, or swathturns. Has "finger wheels and walking stick tines."

COLLEGE BOUND?

HERE ARE TIPS TO GET YOU STARTED ON THE RIGHT TRACK!

By Harold Sampson

SO YOU'RE going to college? Good. You've made a smart decision.

Of course you're looking forward to college with great eagerness. This is as it should be. But sometimes you wonder, perhaps, just how you should act and what you should do during the first year. It is true that college life will be different from anything you have known before, but you will soon feel right at home.

You will start in as a Freshman and will be known as a frosh. You may have to do some menial jobs such as cleaning up after a football game but these things won't hurt you a bit. Most every upper classman has done some of them in his earlier years. In fact, he probably gets a chuckle from looking back on these experiences.

In high school you probably stayed in the same building all day for study and recitation. In college you will go from one building to another for classes, lectures, and laboratory periods, and there will be no study halls. You can study in the library, but you will probably do it in your room which may be in your own home, a dormitory, a fraternity house, or a private residence.

It is well to remember that you are more "on your own" at college than in high school. If you don't make your grades, you'll be dropped by the institution. You don't want that to happen, of course. If it does, what are you going to tell the home folks? So the preventive is obvious: dig in and study. Remember the chief purpose of college attendance is to learn—to get an education.

College should be a broadening adventure. You'll want to engage in a variety of activities — sports, religious, and social life, and perhaps fraternity and club doings. Combine both work and play in proper proportion.

Don't play when you have studying to do. You'll find many "playboys" at college. Some of them are taking light "snap" courses that require little studying. They may make good, congenial friends; but they're apt to be frivolous and trifling and can do you a lot of harm if you cater to their every whim.

You'll find that when you are a frosh there are some things you are not permitted to do. These restrictions may chafe you at first; but they shouldn't. They are part of the traditions of most every institution of higher learning. For instance, you may innocently use a walk that is reserved only for Juniors. You may perch on a fence painted in the Senior colors. Only fourth year students are allowed to sit on it. The chances are you'll be promptly told about your mistake and cautioned not to repeat it. Remember the fellow who warned you has nothing against you personally. He would say the same thing to any Freshman. He may have done this very thing when he was a frosh. If you act belligerent you will be unpopular. Familiarize yourself with the college regulations and obey them. You will be happier if you do. Such traditions are hoary with age and widely respected. Before you know it you'll have the privileges of upper classmen. In fact, that time will come all too soon.

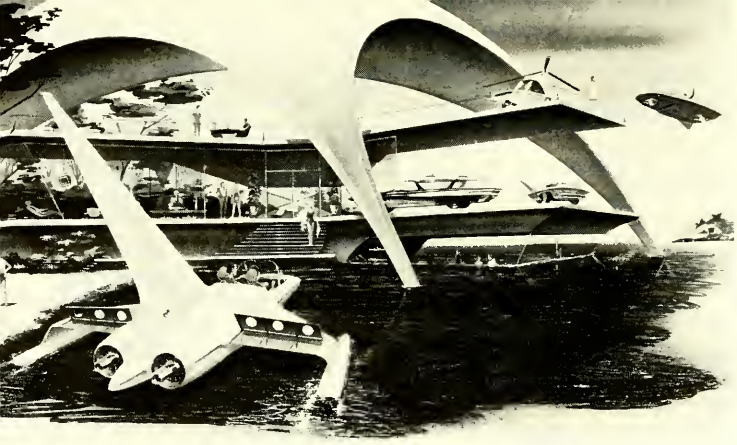
Avoid boasting about your high school achievements. This sort of thing doesn't go over at all in college. If you are outstanding in any way during your collegiate career, you will receive plenty of recognition.

Once in awhile some problem may arise that seems to defy solution. Perhaps an upper classman whom you've learned to trust can help you. The chances are he has been through the same thing himself and can offer sound advice. The best plan, however, is to consult the dean. Most colleges have both a dean of men and a dean of women. These people are trained for the job. By nature they are friendly, sympathetic, and wise. Helping you is a good part of their job so it's a good idea to get acquainted with them. Also, meet with the nearest minister of your own denomination. You'll find the pastor will be delighted to see you. Incidentally, don't give up or even relax your religious life just because you're in college. You'll need it as much if not more than ever there. Go to Sunday school and church the same as always and take part in young people's meetings, too.

Here are a few last-minute tips: don't be a showoff or a smart alec. If you are, you'll be put in your proper place in a hurry by some student who has been there longer than you have. Feel your way around carefully. Use your own judgment about joining if you receive a fraternity bid. If you get a bid to more than one fraternity and wish to "join up," select the one that bears the best reputation and don't affiliate with a certain frat just because a friend happens to be in it.

Avoid being a blind follower. Think for yourself. Make your own decisions without shunning the advice of competent sources like your dean and your pastor. Don't think you can get away with some questionable act just because you are away from home. Word has a way of getting back. Besides, serious infractions of college regulations may result in expulsion and have often done so. Be friendly, courteous, considerate, modest, loyal, respectable, helpful, and understanding. Be diligent in your studies. Be the kind of person you yourself admire and you'll get along all right.

Editors Note—Be sure to see Future Farmer Bookshelf's "education special" on page 56.



Automatic gadgets to prevent accidents? Turbines or atomic power? Maybe!

By Joe D. Boyd

CARS of the FUTURE

IT WOULD take a super-grade spy to get much information on 1961 autos. We—like everyone else—can only guess what the stylists and engineers have produced for next year.

On the other hand, we *can* give you some idea of autos scheduled for 1980 or the year 2000. No one really knows exactly what tomorrow's car will feature, but some of the country's top stylists and designers are willing to hazard well-founded predictions.

General Motors' Researcher Joseph Bidwell says 1980 autos will be *recognizable*—that is, they'll look like descendants of today's cars. He points out that present-day models show hereditary traces of 1931 ancestors. Any revolutionary changes during the next twenty years will be aimed at reducing a driver's hand-and-foot chores to leave more time for making decisions, he believes.

Bidwell and Researcher Roy Cataldo foresee future highways with automatic vehicle controls offering convenience, safety, and travel-time dividends. "Automatic controls would permit higher speeds and closer vehicle spacing than is possible on today's uncontrolled highways," they conclude.

A. L. Boegehold of General Motors predicts some form of die-cast aluminum cylinder block for reducing engine weight. He believes the cylinder head will also be made of aluminum and the oil pan of magnesium.

John Campbell is scientific director of General Motors' research staff. He thinks nuclear energy is a little too far in the future to pinpoint. He says, "Conversion of nuclear power into electrical energy for charging a storage battery would be possible. Or we could produce electrical energy from nuclear power and synthesize gasoline from water to carbonate rock. We may even develop some *entirely new concept* of energy conversion."

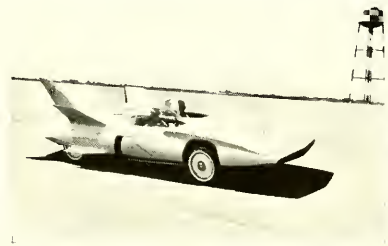
Ford Vice President Andrew Kucher says, "It isn't inconceivable that cars featuring both *ground travel and free flight* will be almost commonplace by the year 2000."

Kucher also thinks engineers will be called on to design "anticipatory controls"—devices to protect you from accidents by sensing the need for a reaction and *actually responding to it*. His crystal ball suggests eliminating steel roofs and replacing them with a shock-resistant, glass-like material for unlimited visibility in all directions. Cars of the 21st century, Kucher believes, will be made of material just as strong as today's and weigh *only half as much*.

As for power, Kucher says there's already a gas turbine engine under development which rivals both gasoline and diesel piston engines for fuel economy. Gas turbines will probably figure in trucks first, according to the Ford executive, but within 40 years may be used in some cars.

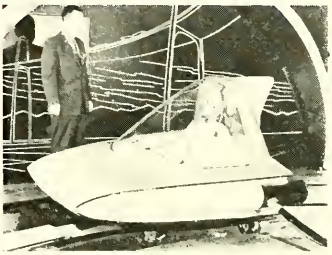
Ford's Director of Styling, George Walker, is concerned about the possibility of *too many cars on city streets*. He thinks the problem of traffic congestion may be met by prohibiting autos from the *entire downtown areas of large cities*. Auto traffic would go underground at the suburbs, traveling on subsurface roads at carefully-controlled speeds. Autos would be parked either underground or in buildings. Walker supports this possibility by referring to a predicted population of 200 million

GM's experimental Firebird III has stick control, eliminating steering wheel, brake pedal, and accelerator.



Drawing by American Motors hints at possible jet-shaped autos with retractable wheels and jet propulsion.

Ford's rail-guided prototype of a future Levacar does away with wheels by sliding along on thin film of air.



by 1970. He also says, "In spite of tremendous air travel advances, more than 80 percent of all trips—100 miles and over—are still made by car."

Walker is enthusiastic about Ford's "dream car," the Nucleon. (See photo below.) "Cars like the Nucleon might be able to travel 5,000 miles without re-charging their radioactive cores. 'Charging stations' might replace present-day service stations."

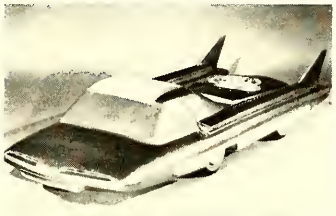
Chrysler Executive Engineer, Harry Chesebrough, predicts three specialized autos by 1985: the Highway Cruiser, the Urbanite, and the Sports Car.

The Cruiser—largest and most luxurious of the three—might be equipped with electronic and electro-mechanical devices for obstacle warning, deceleration, and guidance. Gas turbines might well power the Cruisers. It's possible that a *small lever would replace the steering wheel.*

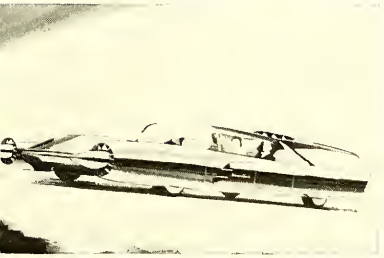
The Urbanite would be used primarily for around-town driving. Sports cars would be reserved for people who like to get off on secondary roads and drive fast just for the fun of it. With manual controls, they would be highly maneuverable. You might call them "throwbacks to the past"—compared to the other two.

How much of this is dreaming? Probably less than you think. Many of these developments are already being used in other fields. Some need only basic study and cost reduction for auto use. How about today's cars? *Ask your grandfather what he would have predicted for 1960—40 years ago.*

This is scaled-down model of Ford's Nucleon, which may become the atom-powered car of your wildest dreams.



Here's Chrysler drawing of Highway Cruiser, possible future auto. It's low, wide, and about 300 inches long.



Try This Quick AUTO INSPECTION

Make night repairs by fastening a flashlight to arm with rubber band.

YOU CAN CUT auto maintenance expense and costly repairs with regular inspection. Begin at the front of your car. Check tires and steering. Remove front wheels and make sure they are lubricated with the recommended grade of grease. In replacing front wheels, make sure the bearing lock nut is adjusted. Draw it up snugly, then back it a quarter turn. Don't forget the cotter pin. Rotate tires regularly.

A clean radiator can add months to your car's life. Flush it and examine hose connections. Check hood brackets and hinges. Check fan and fan belt.

Make sure all visible electrical connections are clean and *tight*. Remove battery acid "bloom" with a wire brush and paint corroded area with ammonia or milk of magnesia. Battery connections should be clean and *tight*. Don't overlook the ground strap.

Look at generator mounting bolts. The generator belt should not be too tight. Check bearing oilers; they need only a drop or two of oil.

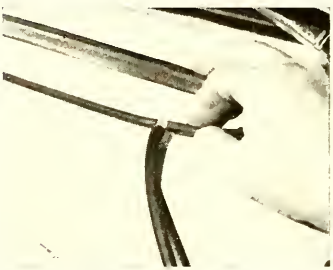
How about engine mount bolts? You are in for expensive trouble if they work loose on rough roads. Same for fuel pump bracket bolts. Clean the fuel pump while you're at it. Make sure connections are tight but don't strip threads. Remove and clean carburetor screen. Check manifold for air leaks. Give air cleaner a gasoline bath.

Trace your car's horn connections. Label the live wire with aluminum foil or a band of adhesive tape so that it can be quickly located if the horn button sticks.

Before you close the hood, check for loose bolts, nuts, screws, and primary (small diameter) electrical wires. Spark plug wires (high tension) should fit snugly in the distributor cap sockets. Wipe off spark plug porcelains in damp or rainy weather and number the wires with a strip of adhesive tape.

Acid seepage will cause "bloom" on battery carrier. Clean with ammonia.

Keep an eye on fittings and connections. Look for vacuum line leaks.



You may live in a desert, but there'll be a time when you need a windshield wiper. Vacuum lines dry out and crack. Check them often in warm weather.

From the driver's seat, check the operation of your instruments daily. Test your brakes daily by "feeling" them out. A spongy or loose brake pedal means trouble. Look for signs of brake fluid leakage around the wheel connections.

Next time your car is on a garage lift, follow the example of smart airplane test pilots. Give your car a "walk-around" inspection. Check underneath for signs of leaks, dangling wires or linkage; for loose bolts and missing cotter pins. Don't forget the muffler and tail pipe.

A daily and weekly inspection may save your life.

lots of good things come from

LOTS OF THINGS LIKE ◇ the tires that carried the fans to the park ◇ the Speedwalk passenger conveyor belt that lifted them into the stands ◇ the restful Airfoam cushions available for their comfort ◇ the vinyl resin in the coating on the infield tarpaulin ◇ the vinyl hat and raincoat on the railing ◇ the Neolite soles and heels on the gentleman on the aisle ◇ the binocular case on the man across the way ◇ the Pliofilm packages those flavorful hot dogs and buns came in ◇ the polyester resin used to make the fiber for the lightweight suits ◇ the rubber blankets that helped print the programs ◇ the vinyl resin in the covering on the cables for the floodlights ◇ the tires on the grounds-buggy ◇ the resin in the masonry paints on the stadium walls ◇ the airship hovering over the field ◇ and many, many more.

FAMOUS
3-T SURE-GRIP
REAR TRACTOR TIRE

Standout Goodyear value in traction and wear. Stronger, tougher, more bruise-resistant, the result of exclusive Triple-Tempering process.

GOODYEAR

WHERE RESOURCEFUL RESEARCH ASSURES LEADERSHIP IN TIRES—CHEMICAL PRODUCTS—FILM PRODUCTS—FLOORING

GOODYEAR

The show must go on – at the ball park, too. And the tarpaulin that protects the infield is just one of the props which, in one way or another, help make this typically American spectacle a Goodyear production, too.

How did a company that started out to make tires become expert at making so many other things? The answer, of course, is research that tries, and tries again–and eventually succeeds. This constant striving to do things better has made the Goodyear name a great one in a wide variety of fields–in chemicals, film, foam, flooring, industrial, shoe and metal products – even atomic energy and defense.

On the farm, for example, superior tractor tires like the familiar 3-T Sure-Grip reflect the benefits of Goodyear's growing versatility. So do countless other products for home, industry and national defense. Inevitable result when a research-minded company goes all-out to "Protect our Good Name." Goodyear, Akron 16, Ohio.

Speedwalk; Airfoam; Neolite, an elastomer-resin blend; Pliofilm, a rubber hydrochloride; Sure-Grip–T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

CDUCTS–FOAM PRODUCTS–INDUSTRIAL PRODUCTS–METAL PRODUCTS–SHOE PRODUCTS–AVIATION PRODUCTS–AIRCRAFT.

photo roundup

A Citation of Achievement was given National President, Jim Thomas, at Atlanta's Chamber of Commerce banquet.

Former National President, Dan Dunham, received Fort Leavenworth's "Soldier of the Month" award for March. Col. Francis Liwski made presentation.

Illinois FFA'ers, Gwinner Snyder and Ron Gehrig, talk to Dean Karl Gardner at Guest Day on campus at University of Illinois College of Agriculture.

Martinsville, Indiana, Vo-Ag students know their teacher, Virgil Telfer, Sr., is making supervised farming visits when they hear his motorcycle coming.

Sweetheart of the Berrien County FFA in Georgia, Patsy Giddens, receives jacket from President Jimmy Gaskins.

even if you're well-to-do where can you outdo this?

Nowhere will you find a car more mindful of your needs than a new Chevy. Whatever model you pick, you'll find it gives you more room where you want more room (be it for baubles, baggage or beagles)—with a higher entrance height, wider seating and (in the case of wagons) wider cargo area than any other car in its field. Chevy's also the only leading low-priced car that gives you the comfort and quiet of Full Coil springs at all four wheels. Be sure to come in soon and let your dealer show you all the ways Chevrolet aims to please without once losing sight of your budget:

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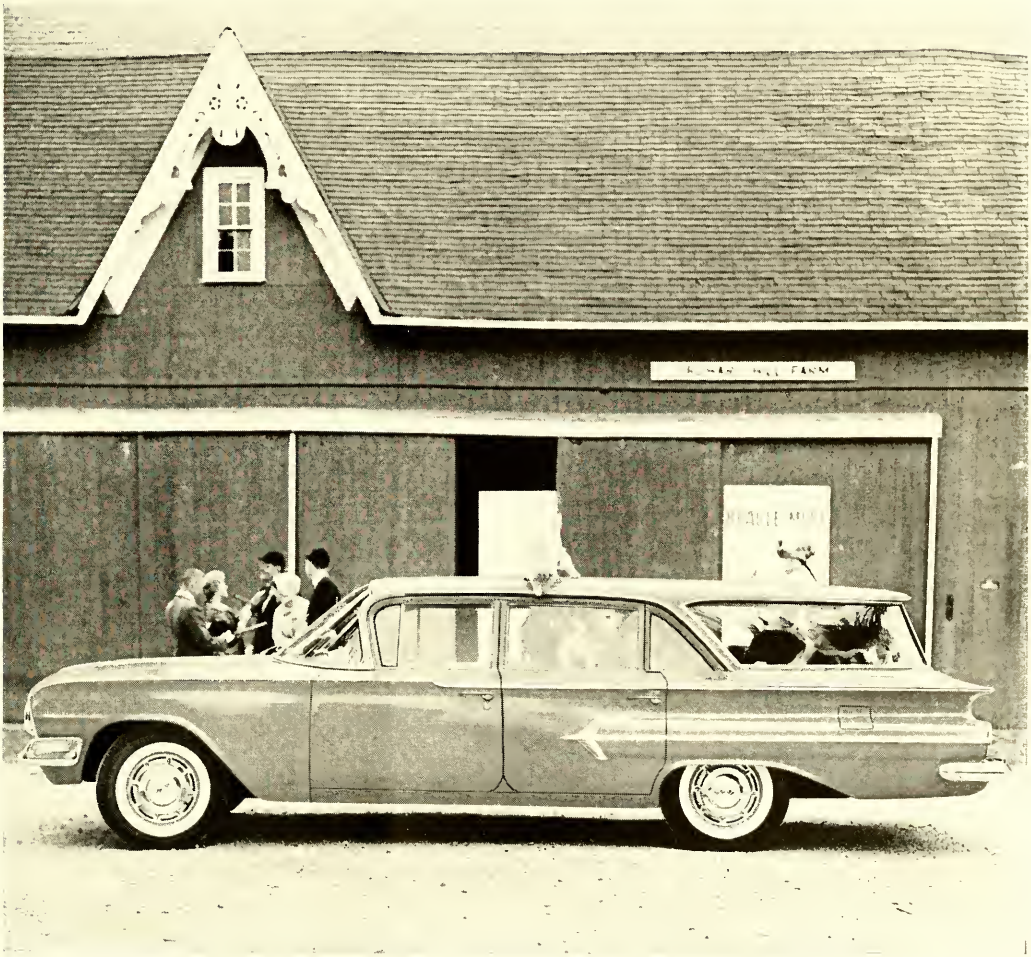
Chevrolet Division of General Motors, Detroit 2, Michigan

CHEVROLET



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Shorthand for Students

By Ted Pollock

HAVE YOU ever missed out on note-taking when a fast-talking instructor left you behind? That's probably happened to every student; but there's something you can do about it.

Don't rely on memory. It might get you by most of the time, but at some key moment—say final exams—it can backfire. You just can't remember everything. The only practical solution is a "quickie" training course in "student shorthand" that can be mastered in about half an hour. It'll help you take rough notes in high school and will be especially valuable in college. Based on techniques used by reporters, this "shorthand" can increase your writing speed by 40 to 50 percent. If you've ever suffered through the "agony of recall," set your own price on its value. There are just six rules:

1. Abbreviate. Almost every word can be shorthanded. Vowels in particular can be omitted. For example, "Satisfied customers have made our reputation" may be abbreviated, "Stfd custs hv mad r rep." With practice you'll find it's easy to train your mind and hand to deal only with the skeletons of words.

2. Leave out unessential words. It is seldom necessary to take down a word-for-word transcription of a conversation or lecture. Our daily speech is peppered with frills that, while flavorful, are meaningless or unimportant. Take this example: "I, for one, agree that farmers should be concerned with government programs, world conditions, scientific advancements, and price variations."

None of the *meaning* is lost by saying, "Frmrs shld b concrnd w gvrmnt prgrms, wrld condtns, scntfc advncmnts, & prc vratns"—*if you know the system.*

3. Take advantage of natural abbreviations. Look at the keys on any typewriter. You'll find a host of abbreviations and symbols that can help cut writing time. The use of digits instead of words to express numbers goes without saying. But there are other time-saving symbols, such as ½, ¼, # (number), %, $, ¢, @.

Because of their pronunciation, certain letters and numbers may be substituted for common words; *b* (be), *4* (for), *r* (are, our), *u* (you), *2* (to, too). And don't overlook the convenience of such old abbreviations as *i.e.* (that is), *e.g.* (for example), *c.* (around, about, approximately), *ibid.* (the same).

Now put them to work. The sentence, "Product knowledge has a dollars and cents value for you, too," can be shortened with these natural abbreviations, to "Prod knwlg hs a $ & ¢ val 4 u, 2."

4. Abbreviate suffixes. There are several common word endings in English, like -ive, -al, and -ment. By adopting abbreviations for the most common

ones, you can cut writing time. Try this: *v* (-ive, -ative), *l* (-al, -ical, -ogical), *mt* (ment), *bl* (-able, -ible), — (ing). You can make up others if you wish. The only important thing is to *know your own system.*

5. Adopt a system of letters for common words. According to the Handwriting Foundation, less than 100 words make up 50 percent of the average speaking vocabulary. If you can devise a system of letters for the most common nouns, pronouns, conjunctions, and prepositions, you have half your problems licked. Many reporters use these: *o* (on), *f* (from), *w/* (with), *w/o* (without), *xc* (except), *nst* (instead), *bc* (because), *h* (he), *w* (we).

6. Use mathematical symbols. Quite aside from numbers, mathematics is rich in easily understood symbols. Not only can + — mean plus and minus, but in certain contexts may stand for *pro* and *con, benefit* and *drawback, yes* and *no, more* and *less, positive* and *negative, including* and *excluding.*

Similarly, — may signify *the same as, means, stands* for, while = can mean *different from* or *does not mean.*

The simple multiplication sign, X, can serve for the word *times,* or as a suffix added to the numbers *1* or *2* to change them into *once* or *twice.* The *arrow* may be used for such expressions as *leads into, turns into, yields, results in.*

Just six rules. But they can mean the end of chaos and the beginning of more orderly—and successful—schoolwork. Try them. B4 u no it, ul b tk—or own nts in ½ tme!

PASTURE

cuts dairy feeding costs by 2/3

New Jersey experiments show that pasture for dairy cattle cuts costs to less than a third those of straight grain and roughage feeding. Lower feed cost is just one reason why many farmers are looking to pasture for extra profits. Other examples of pasture benefits:

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Water conservation—Missouri tests show that four times as much water was lost from sloping cornfields as from alfalfa on the same plots.

Reduction in equipment expense—Pasturing livestock eliminates the need for much expensive machinery and equipment.

Erosion control—Missouri researchers report 400 times the soil loss from sloping cornfields as when the same land was planted to alfalfa.

Wide management choice—Pasture can also be cut for hay, grass silage or seed if needs dictate a change.

Many research reports from across the nation cite the advantages of renovated permanent pastures or improved pastures in a crop rotation scheme. Pasture lands often produce more total digestible nutrients than the same land in grain—and at far less cost.

We'd like to send you a new, free book, *Pasture—How to Reduce Feed Costs.* This book reports many research studies which show how livestock feeding on pasture gives extra profits. Further than that, the book tells how to renovate pasture. It describes methods for lengthening the pasture season, grazing techniques and recommended forage varieties for every section of the country. It's chock full of information which every farmer or potential farmer will value. You can use it for speeches, group topics, discussions or just reference. Why not send for your free copy today?

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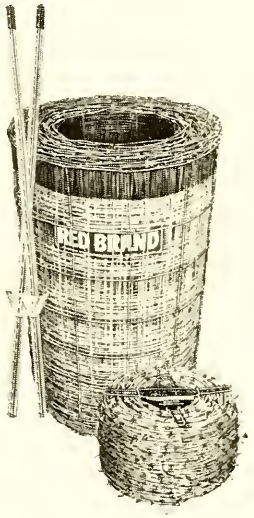

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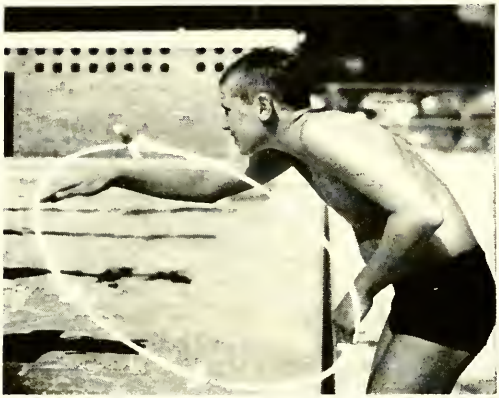
How to Swim

By Raymond Schuessler



Beginners should learn the "dog paddle." It's just rotation of hands in alternate circles. One hand forward, one back. Bend forward, cup hands, "bicycle" with your feet.

SWIMMING requires no special ability or body build. You can learn to crawl in the shallow end of a pool or the wading area of the beach.

Basic movements are simple. Combining the arm, leg, and breathing movements in perfect rhythm is a little harder. But you can do it with practice.

Why not start with the dog paddle? It's the most elementary stroke—used by the Indians and primitive races. The idea is not to develop form but to get confidence in your ability to stay afloat. The motion with your hands is the same you would use to dig a hole in the sand. Your feet move in a small arc, as if you were riding a bicycle.

To learn the crawl, you must first learn to prone float. Stretch out with your face in the water and your hands shoved out ahead of you. Start a few feet from the side of the pool and shove off toward the safe edge. Practice this glide a little farther back each time.

Next, your breathing! Hold the side of the pool, put your face in the water, and breathe out through your mouth. Then turn your head sideways and take a full breath. If you reverse this procedure you won't be thirsty for a long time. Breathe in through your mouth.

Now your footwork! Best way to learn the kick is to lie on the edge of the pool with your legs stretched over the side. Your kick should be in a small arc with the power coming from your thigh and stomach muscles. Later, try it in the water as you hang onto the edge of the pool. Then shove off, put your face in the water and see how far you can "kick" your way along.

Once you have learned to move along with a kick, you are ready to tie your arm movement into the stroke. In a waist-deep section bend over so your chest and face are in the water. Pull one arm beneath your body toward your thigh. As it reaches the thigh, your other arm starts to pull, and the first arm reaches forward past your head for more water. Each time your right—or left, if you prefer—hand reaches your thigh, turn your face sideways for a gulp of air.

Put in your flutter kick and away you go. One word of caution: Don't ever swim alone in deep water, no matter how expert you become.

Try the "flutter kick" while hanging from water's edge. Kick up and down in small arcs with power from thighs and stomach. Keep your knees and ankles completely relaxed.

Reach forward—past your head—and pull water under the body. When your hand reaches the thigh, turn head sideways for gulp of air. Repeat process for the other arm.

Start forward reach with high, bent elbow and loose forearm. During movement, turn head back into water, exhale through mouth. Turn face to other side for same movement.

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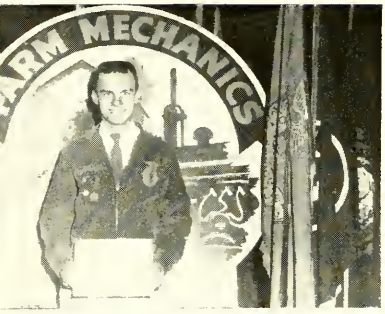
"Farm Mechanics has been an exciting, interesting challenge for me, and I've enjoyed every minute of it!"

Jay E. Barth—National Farm Mechanics Winner



The National Farm Mechanics title was Jay's reward for his hard work.

Since Jay does a lot of welding, he made a cart to move acetylene tanks.

This four-foot car ramp was made of 4" channel iron welded together.

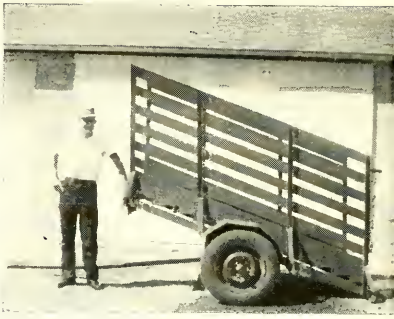
SKILL in farm mechanics has enabled Jay Barth of Flanagan, Illinois, to make his home farm more efficient and save money while doing it. It also resulted in his being named National Farm Mechanics Winner at the National FFA Convention last October.

Jay's key to success is that he enjoys his work. His interest in farm mechanics began during his freshman year in high school and was enhanced with the addition of a farm shop at home.

"We were planning to build a new machine shed," Jay explains, "when I suggested that we add another 20 feet for a farm shop. Dad agreed if I would take over and do the machinery repair work—so it was a deal. The shed is built of concrete blocks with the ceiling in the shop area closed in. We also built a chimney and put in an oil burner."

Equipment in the Barth's farm shop includes an air compressor, air greaser, electric hack saw, both acetylene and arc welders, emery wheel, turning lathe, drill press, and tool chest. A work bench extends across one end and Jay made his own bolt bin which has about 75 compartments. He has spent nearly $1,000 adding needed shop equipment.

Though Jay stays busy in his shop at home, many of his projects were constructed in the vo-ag shop at school. It would take quite a list to inventory all the equipment the 18-year-old Future Farmer has made, but it varies from automatic water tanks and feed bunks to a tractor hitch; from an 18-inch electric fan to a fertilizer applicator. He has also kept their farm buildings in good repair. Jay says, "My projects were based on the needs of our home farm."



Jay made this portable loading chute in the farm mechanics shop at school.

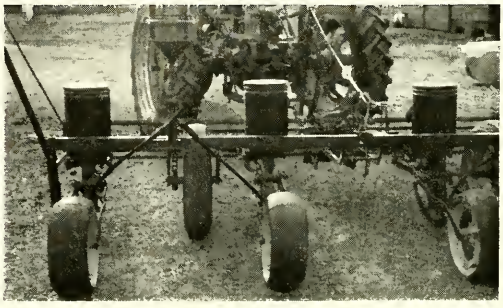
Advisor Howard Cotter found Jay was quite a handyman in helping maintain the equipment in the school vo-ag shop. The industrious youth is adept at using both the arc and acetylene welder, doing electrical wiring, soldering, tractor mechanics, painting, wood-working, and applying other skills learned in vocational agriculture. Though his shopwork has saved a lot of money on the home farm, Jay says, "The knowledge I have learned will be of most value to me as an adult farmer."

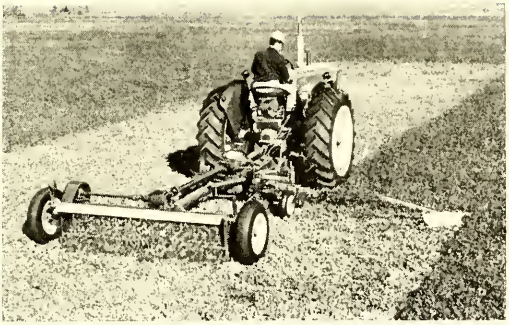
Jay is safety conscious, particularly in his shop. His advice to others, which he follows himself: "Wear goggles or welding helmet when operating welders; always wear glasses when using the turning lathe; and ground all electric tools. Make sure guards are always in place and never wear loose clothing in the shop."

Jay is now out of high school and finished his hitch in the Army on April 17. His plans are to get on with his business of farming. He and his father farm 440 acres of land and raise 300 head of hogs in partnership.

A view inside the Barth's farm shop. Notice pipe saw horses in foreground.

Farm machinery is kept repaired. He also made aldrin application, below.





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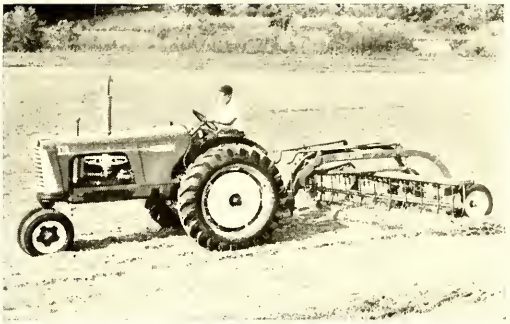

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NEW! Model 62 Baler
- Roto-Flo feed
- Uniform bales, 12 tons per hour, wire- or twine-tie
- Leaf-tight construction, positive knotting

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While you're talking with your Oliver dealer, why not ask for a TEAMED-POWER demonstration—a high-efficiency Oliver tractor matched with one of the four quality-saving hay tools. Then see how much more quality forage you'll bring in. Remember, too, early trade-ins for Oliver tractors and balers are eligible for a 6% bonus on your down payment until delivery time.

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60—Reynolds Irrigation Digest is a book you should have. Made up in handy "pocket-size," this 48-page digest contains condensations of 27 fact-filled articles on portable sprinkler irrigation taken from leading farm magazines—ideas from all around the country. (Reynolds Metals)

61—TIME, Past, Present, Future makes for interesting reading. The story of time is documented from prehistoric days right up to the space age. You'll enjoy reading this one *just for fun* or use it as a reference for a science report. Using a colorful cartoon style, the booklet is full of facts on the measurement of time and its importance in our daily lives. (Paragon Electric Co.)

62—How to Choose and Use Your Farm Sprayer offers timely information you can use *now*. This 16-page booklet gives tips on selecting the right kind of sprayer and how to use it *efficiently*. It covers proper calibration of your equipment, and includes full color insect and weed recognition charts with suggested chemicals for their control. It will help you farm better with agricultural chemicals. (Hanson Equipment Co.)

63—First Aid gives you 20 pages of valuable information on an ever-important subject. With the coming of summer you'll be outdoors more and have many occasions to get cuts, scratches, and bruises on the farm. This booklet *tells you all you need to know* in the first aid care of such wounds. (Hynson, Westcott & Dunning)

64—It's Your Choice tells how to choose the military service program that will serve *you* best. It gives you concise descriptions of your obligations under present law and the many choices available to you in meeting your responsibility. All the programs offered by all the services are clearly explained. The important facts presented in this booklet make it *must reading* for *every* young man *and* his parents. (Department of Defense)

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Offer not good after Sept. 1.

Top Hogs

(Continued from Page 22)

and get a 14 percent protein ration. The 75 to 125-pounders in section three are fed 13 percent, and the fourth section animals get 12 percent up to a 200 to 225-pound market weight. Most of the feeders are sold at 5½ months. But Harkey says they're shooting for a 4½-month finish.

They've been trying all along. "Experimented with 10-pound weaning at three weeks," Pluenneke says, "didn't like the results. We're sticking with regular six-week weaning."

They have a 107-acre pasture for sows, suckling litters, and replacement stock. Fall oats are sowed for grazing up to spring. About May, Farmhand Fred Zavala puts in Sudan grass and sorghum almum—good spring and summer grazing.

But Pluenneke and Harkey don't believe in growing their own feed. Fact is, they just don't have time. Harkey is District Sales Manager for a feed company and Pluenneke is a full time ASC office manager. "But even if we did have time, I figure we can buy feed about as cheap as this West Texas sand will produce it," Harkey says.

Sanitation figures high on their plan to reach that 4½-month market age. The two former FFA members have installed a fast-working manure disposal and cleaning system for the feeding parlor. It works like this:

Zavala just hoses each of the four concrete feeding sections. Manure is washed to a sloping concrete drain. Then it's gravity-fed through a 200-yard tile drain to a lagoon. It's simple and efficient. But it doesn't end there. They've rigged a gas-powered pump at the lagoon. Afternoons, it's easy to pump a water tank full of the "liquid manure" and quickly spread it over the pasture.

Don't get the idea that Pluenneke and Harkey have gone overboard on sanitation. They haven't. At first, they kept a bucket of liquid disinfectant at the farrowing house door and insisted that everyone use it. But they eliminated it when visiting neighbors complained about it "eating up their boots."

Sometimes it's hard to do, but they always clip and iodine navel cords of all young pigs. They clip needle teeth about the same time. And they also follow "the book" by providing heat lamps for all farrowing stalls. When pigs are about three days old, they get a soluble iron injection. Boars are castrated before they're two weeks old. Worming and cholera vaccination are other "second nature" practices.

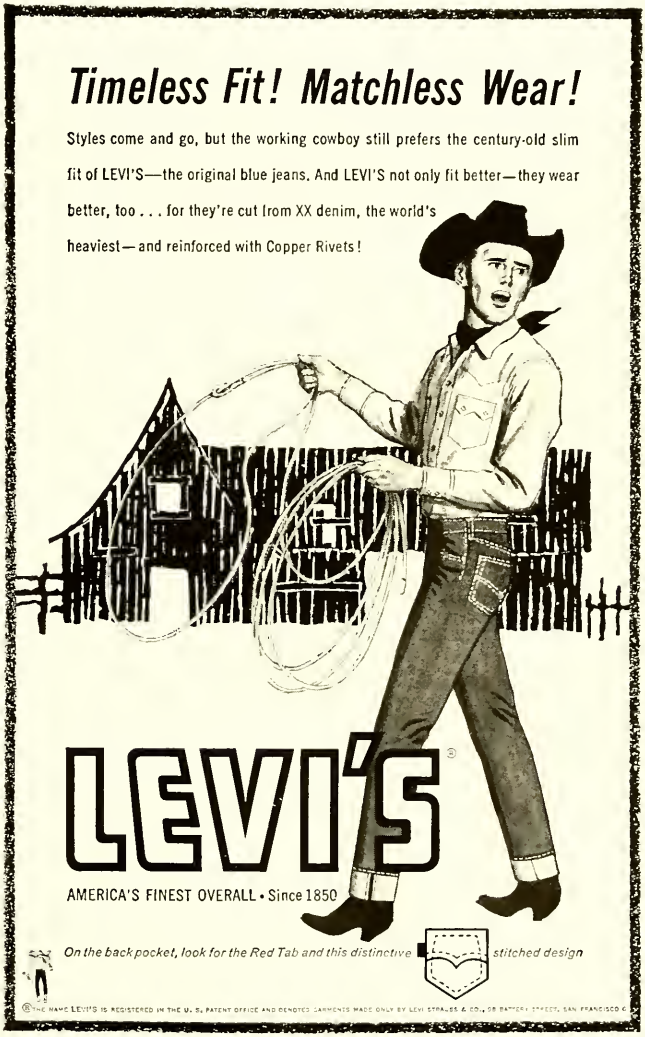
I commented on the all-steel farrowing pens and feeding sections. "Saves replacement," Harkey said, "pigs gnaw wood pens apart in pretty short order. Might be interested to know how inexpensive these were, too. They're made of GI surplus airplane landing mats."

I wondered where West Texas farmers heard of landing mats. So I asked them. The answer surprised me.

"I was a jet pilot in the Air Force for four years," Harkey said. On second thought it should have been obvious—they're putting jet-age touches to the Texas hog business.

◆◆◆

Ag teacher George Garretson, left, helps Harkey make a disease check. Note heat lamp in center guard rail.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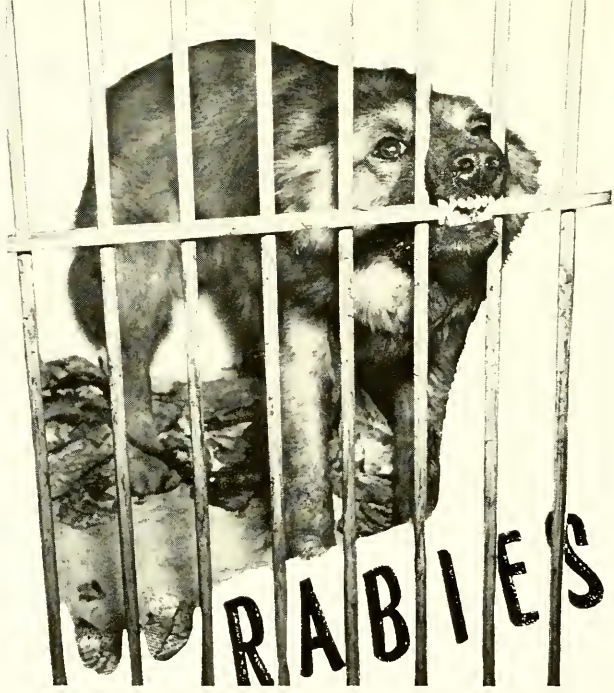


There's no cure for rabies, but you can help stamp out the ancient disease with a community control plan.

ONE OF HISTORY'S oldest recorded diseases, rabies, remains one of the most horrible. The victim can be *any* warm-blooded animal from dog, man, cattle, wildlife—to bats! The cure—*none!*

Little wonder it's terrified people for ages. The only way to fight it is *prevention*, avoiding infected animals entirely or by vaccine treatment in the early stages. Once clear-cut symptoms appear, it's too late. Nothing can prevent a lingering, painful death.

Yet despite the fact rabies poses a constant threat to public health, few people know much about it; even fewer are aware that it *is* a threat.

Part of the problem is that rabies statistics don't outline the full gravity of the situation. In the ten-year period from 1947 to 1958, U. S. rabies deaths in man fell from 22 to 6. Cases among domestic animals dropped 68 percent in the same period.

Since the disease makes no distinction between wild and tame animals—or man—the fact it's increasing in any area should cause concern in every thinking community. It could—and in the past *has*—spread easily to reach almost epidemic proportions.

Just what makes the disease so horrible and deadly? It's caused by a virus transmitted in the saliva of an infected animal through its bite. This virus is highly infectious and of a *neurotropic* type—it "likes" nerve tissue.

Introduced into the body, it attacks the brain and spinal cord, results in either "furious" or "dumb" rabies.

The *furious* type has been largely responsible for the common picture of the mad dog. If the dog—say the farm pet—is bitten by a rabid animal and develops furious rabies, the disease is likely to go through the following stages.

You'll see a marked change in disposition for one to three days. A friendly, good-natured dog may become sullen and disobedient. A normally vicious dog may become unusually attentive and playful. Moods will alternate.

Scratching, avoiding light and noise, and a tendency to hide in a dark place are also common symptoms of the first stage. The animal avoids normal food and tries to swallow indigestible objects like sticks and stones.

He craves water, yet cannot swallow because the throat muscles are paralyzed; hence the drooling and coughing fits—the "foaming" mouth and *hydrophobia*, fear of water.

Unrest and excitement increase to frenzied activity. The animal is now a raging beast which tries to tear or tears any object into pieces. Its torment completely cancels his normal fears.

Caged dogs often break their teeth trying to chew their way to freedom. The loose dog roams far from familiar areas to run wildly and aimlessly, attacking any person or animal within its path—*even its master!*

In the end, a creeping paralysis begins and he limps home to die of suffocation as the respiratory system fails.

The tragedy is that a simple antirabies injection might have spared the dog—and the people it might have bitten.

Dumb rabies is very much the same except the paralysis sets in sooner. And rabies in man is not much different. With equal, tragic pain, rabid men have been known to die cursing their Creator, their loved ones, and themselves.

Of course, in humans awareness of the danger means the proper measures can be taken. The Pasteur series of injections can be effective when started soon enough and continued over a period of 14 to 21 days. It cuts off the virus from the nervous system.

But speed is the key! Any animal bite should mean a quick trip to the doctor and testing the offending animal if possible. Each hour of delay means danger. And with bites on naked flesh, especially around the face and upper parts of the body, there is barely any time-lag at all.

But even the medical treatments have drawbacks. They're painful—though nothing compared to the disease itself—and in some cases, they can be dangerous.

Because of this, the American Veterinary Medical Association stresses that prevention—rigorously enforced—is still the best policy.

The history of rabies in many countries bears them out. England is a good example. Rabies ran rampant in the British Isles during the American Revolution. In the 19th century, the country began to enforce strict measures: licensing all dogs, muzzling all dogs, and quarantining all incoming animals for six months' observation. Also, capturing and humanely destroying all unlicensed "strays."

Result: Rabies was completely eradicated!

Similar measures got the same results in Ireland, Denmark, Norway, Sweden, Australia, and Hawaii.

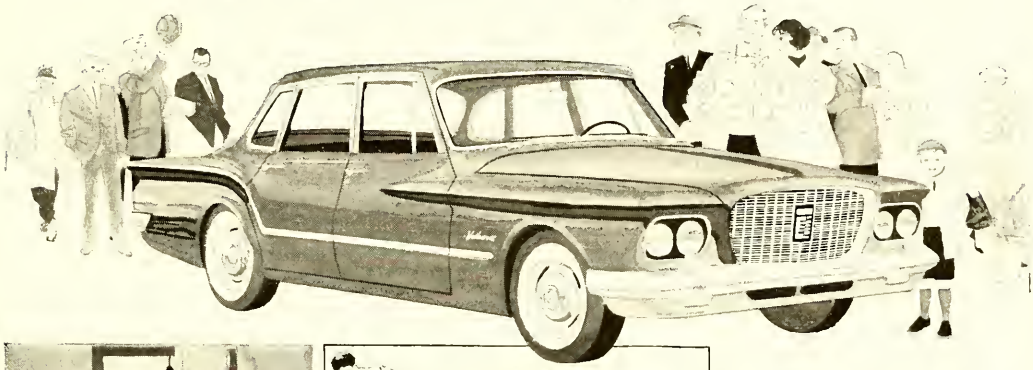
Any community can take these control measures, yet, many don't.

While the immediate responsibility for rabies control falls to each separate community, the fight is being waged on other fronts. Science has developed a *hyperimmune serum* and, under some circumstances, its timely use can reduce the number of Pasteur injections required to prevent the disease.

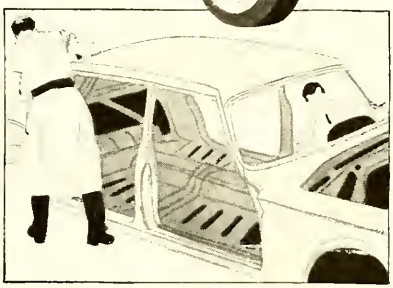
Veterinarians hope—along with all who truly understand the disease—that rabies, some day, will become just an out-of-date word.

The inside story of VALIANT

The hottest new car in America—that's Valiant, Chrysler Corporation's new economy car. Here's how our top engineers and stylists brought it from the drawing board to the dealer's showroom in only 16 months . . .



SECRET PROJECT A-901, (so hush-hush that only a handful of people knew of its existence) was set up to develop a new kind of car—one that would economize on gas and size but not on comfort or pep. That car became Valiant.



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A SPORTS CAR LOOK ALL ITS OWN. Valiant's clean lean styling is completely new, yet has an unmistakable classic European touch. It's the only family-size economy car that looks like an expensive sports job!

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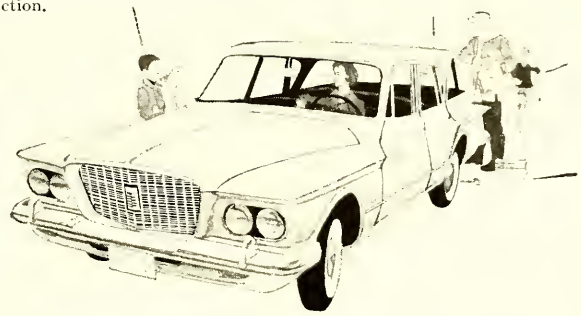

VALIANT IS PURE AUTOMOBILE. Mom will like the way it parks so easily. Dad will like the cargo space and that brand-new six with its big pickup and tiny gas appetite. Why not ask them both to stop in at the dealer's with you soon—for a drive that will bring out the difference great engineering makes.

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He was known as Bronco Donners' boy and thought to be coming along fast.

THE RODEO KID

By Arlene Hale

The bronc was big and strong. Will the whistle never blow, Chuck wondered.

THEY REACHED Watertown before sundown. Dad drove straight to the rodeo grounds, the trailer dipping up and down behind the car as they bounced over the rough road. Of all the rodeo towns, Chuck hated this one the worst. It held painfully sharp memories he wished he could forget.

"Looks like we aren't the first to arrive," Dad said.

"No," Chuck replied.

Dad had tried hard to make easy conversation the last two days on the road. He hadn't once mentioned it, but Chuck knew he was thinking of last year, remembering and feeling ashamed.

Bronco Donners was nearly a legend in the rodeo circuit. He was top man, the best rider, roper, and bronc buster of the whole lot. Once, not too long ago, he used to say to Chuck: "Won't be long until you can take over for the Donners; then I can sit on a fence somewhere and take it easy."

Chuck had swelled at the thought with fierce pride. To be like Dad was the biggest goal of his life.

Around the rodeo arenas in those days, he was known as Bronco Donners' boy and thought to be coming along fast. Then last year he'd entered into real rodeo competition. Soon after that everything had gone smash.

Dad climbed out of the car and stretched his lanky legs. Chuck reached across with his left hand to grasp the door handle and push it down. It was simpler than maneuvering his right arm with its stiff elbow into position.

There was the smell of dust, horseflesh, and leather in the air. The smell used to excite Chuck, but now it only turned his stomach over like it was a small ship struggling for survival on a rocky sea.

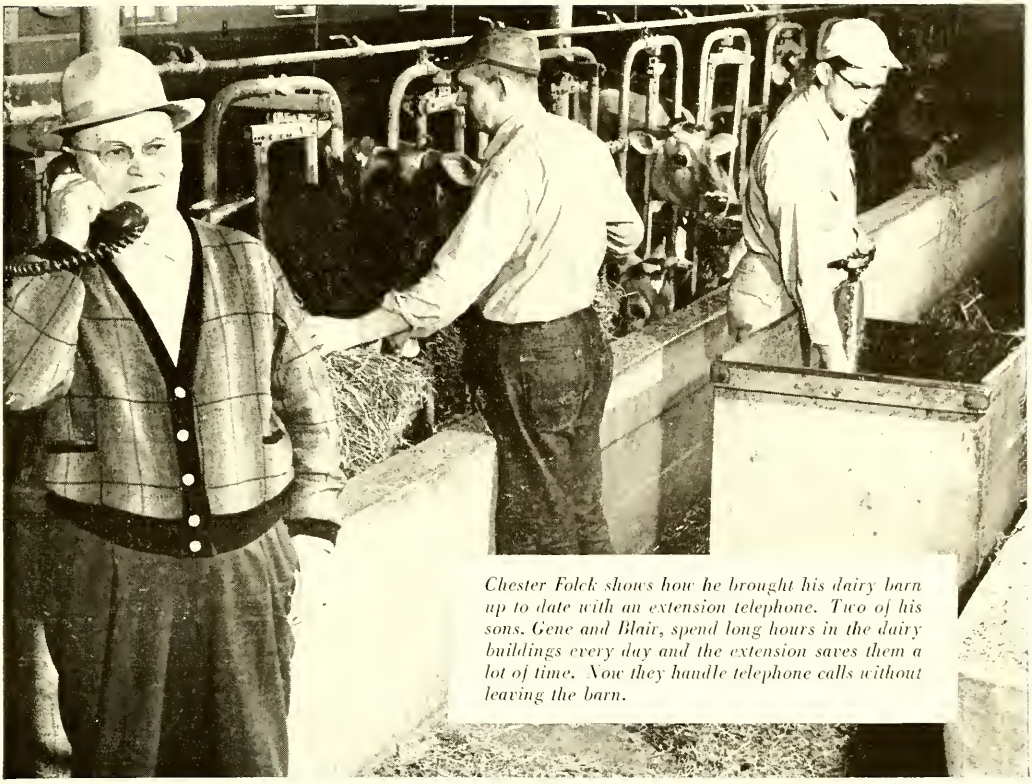
"Hello, Bronco."

One of the regular rodeo riders paused to shake Dad's hand and slap his back. There was only a curt nod in Chuck's direction.

"Guess we'd better get over to the camping grounds and get set up for business," Dad said.

"Sure thing," Chuck nodded.

He knew Dad was anxious to go and look over the wild



Chester Folck shows how he brought his dairy barn up to date with an extension telephone. Two of his sons, Gene and Blair, spend long hours in the dairy buildings every day and the extension saves them a lot of time. Now they handle telephone calls without leaving the barn.

Here's how an extension telephone saves a farm family over 25 days a year

Glenn Folck uses this office telephone to sell purebred Jerseys all over the country. Incoming calls are answered on this telephone. If someone in the dairy buildings is wanted, Glenn rings a bell in the barn simply by pressing a button. "When a man calls you," says Glenn, "he doesn't want to be kept waiting. That barn extension is the answer."

75 head of fine Jersey cattle keep Chester Folck and his three sons busy from early till late on their purebred farm near Springfield, Ohio. Two of his sons, Gene and Blair, spend full time in the dairy buildings. The third, Glenn, handles most of the family's business affairs and spends a good part of his time in the office.

In a usual day the Folcks take or make some 20 to 30 calls on an extension telephone in their barn. Most are business calls. Some are long distance.

"Without that extension phone, we'd have to keep people waiting on the line while we run to fetch someone from the barn," Chester Folck says.

"We figure we'd lose at least a half a day a week between the house and the barn. For the little it costs, we just couldn't afford to be without that extension."

Why not have a look at your own farmstead with an eye to putting in an extension telephone. It can pay its way over and over by saving your time. Convenience is a bonus. Just call your telephone business office. They'll be glad to help.

Bell Telephone System

horses that would be used tomorrow. Once Chuck had known the same itch, the same excitement. Dad made quick work of parking the trailer.

"Want to come?" Dad asked, his eyes carefully lowered.

"Go ahead, Dad . . . I'll—I'll start supper."

Chuck had just unlocked the trailer door when a shadow fell across the ground. He braced himself. Now it was coming. The one thing he'd dreaded the worst.

"Well, if it isn't Chick Conners."

Chuck knotted his fists and turned slowly.

"The name is Chuck."

Tanner Wilkes was about his own age and, like himself, a rodeo kid. His father, Dan Wilkes, was the man who gave Dad the most trouble in the arena. Tanner was following in Dan's footsteps and doing well.

"What do you want, Tanner?" Chuck asked.

"Now, Chick, that's not what I call being friendly at all. What's the matter, did I ruffle your feathers a little?"

Chuck felt a hot thread of temper weave in and out of him, and he fought to control it. It would only please Tanner all the more if he got mad.

"Why aren't you over looking at the horses with your old man, Chick?"

"You know I haven't ridden since last year," Chuck said evenly.

Tanner's voice dripped with sarcasm. "Oh, of course! I clean forgot about your poor, poor arm. Well, see you around, Chick."

Chuck stood there shaking. Little beads of sweat formed on his forehead. He flicked them away with his left hand for he could scarcely raise his inwardly bent right arm higher than his shoulder. He really couldn't. Why couldn't people believe that? But then, he knew why.

It was in this very same town and it was right after his injury at Crooked Fork. His arm was still in a sling and he was out of the rodeo game, perhaps for good. Everyone, even Tanner, had been genuinely sympathetic.

"Anyway, you went down fighting, Chuck," Tanner grinned. "When that bronc threw you and trampled you, I thought for a minute you'd just spit right in his eye!"

Then something had happened to change their sympathy to contempt. It had been one of those rare accidents. In transferring the wild horses from the corrals to the chutes, one had managed to break away. He thundered about like lightning come unchained.

He broke one of the fences and roared away on the loose, coming straight for Chuck and Tanner. Just beyond them were several dozen people heading for the stands. Any one of them could fall victim to the bronc's vicious, slashing hooves. It was up to Chuck and Tanner to somehow attract his attention and turn him away from the crowd until someone mounted up and got a rope on him.

For one heart-stopping, dry-mouthed moment, Chuck knew absolute, numbing fear. He knew he should, like Tanner, do all he could before springing for the corral fence and safety.

But he couldn't. He took one look at those pounding hooves, the wild, red-eyed snorting horse, and turned to run, leaving Tanner to face him alone.

Tanner stood his ground and managed to turn the horse away from the terrified crowd. Then, in a matter of seconds, a rope was thrown around the

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*The Super-10 is also available in a 5-hp model to comply with various state laws.

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"Hmmm . . . only ten minutes . . . now let's see how long it takes to load 'er back up again!"

This year—protect forage crops from insects and dairy cows from hornflies with Du Pont Marlate® methoxychlor

One versatile insecticide, Du Pont "Marlate" methoxychlor, can help dairymen increase profits two ways in 1960—more forage per acre, more milk per cow. "Marlate" provides outstanding protection against forage insects in clover and alfalfa, plus equally effective control of hornflies on dairy cows. And when methoxychlor is used as recommended, it does not result in residues in milk.

No other insecticide is recommended for the control of so many forage insects as methoxychlor—alfalfa weevil larvae, leafhopper, spittlebug, alfalfa caterpillar, armyworm, clover leaf weevil, flea beetle, pea weevil, cowpea curculio and others. These pests can cut clover and alfalfa yields by as much as a half ton per acre . . . reduce the protein and vitamin A content of forage, too. Spraying with Du Pont "Marlate" methoxychlor stops these insects, protects forage yields and quality.

Apply one tablespoonful of Du Pont "Marlate" 50 or Du Pont Dairy Cattle Insecticide per cow with your hand, as it comes from the bag, to control hornflies for about three weeks. One 4-lb. bag treats 20 to 30 cows for a season. No other insecticide is easier or more economical to use; no other gives longer-lasting, more effective protection.

Du Pont offers three formulations containing methoxychlor:
"Marlate" 2-MR, an emulsion; "Marlate" 50 and Dairy Cattle Insecticide, wettable powders.

On all chemicals, always follow label instructions and warnings carefully.

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BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

Marlate® methoxychlor
INSECTICIDES

bronc's neck and he was led away, kicking and fighting every inch.

Tanner eyed him with cold contempt.

"Chicken," he said softly. "Chicken!"

He'd turned and stomped away. It was soon all over the arena what had happened. Dad looked worried and took him by the shoulders.

"You all right, son?"

"Sure, Dad. I—I ran like a scared rabbit, though."

Dad's grip tightened.

"Who wouldn't? After the spill you took the other day, anyone would be a little jumpy. It's nothing to be ashamed of."

For awhile Chuck believed that. But not for long. The others in the rodeo circuit wouldn't let him. Tanner had made no bones about what had happened. They soon convinced themselves that his arm wasn't as stiff as he pretended, that it was an excuse he used to hide his cowardice behind.

Chuck had supper ready when Dad came back to the trailer.

"Hmmmm. Smells good in here, Chuck."

When they'd finished eating, Dad pushed back his plate.

"Want to go into town?" he asked.

Chuck shook his head.

"I think I'll stay here."

"Okay. I won't be long. Want to get a shave and a haircut. Leave the dishes, son. We'll do them later."

But Chuck did them. He wanted to keep busy. He made as much noise as possible and turned the portable radio on loud but even then it seemed he could hear the stamping of horses in the nearby corral. He was sweating again.

The rodeo was to start at two the next afternoon. Instead of going into the stands to watch, Chuck tugged down down his hat with determination and went to join the other rodeo people near the chutes. Tanner grinned with a smirk.

"Better get up in the stands where it's nice and safe."

He was sweating again. He was glad when things got rolling. Dad grinned at him, unable to hide his surprise at seeing him there so close. He held up two crossed fingers and Chuck held up his.

Things rolled along rapidly. Dad was up to par as usual, but it seemed to Chuck that he was too tense and pressing too hard. The calf roping event was next. It seemed the calf had scarcely cleared the pen when Dad had a rope on him and was off the saddle. Something was wrong! The calf got away from him. A shout of surprise went up from the crowd. Then Chuck saw the reason for it. Dad was limping badly. He managed to get the calf down again and tied, but his time was overlong. He'd probably finish last in that event. He didn't mount up again but led his horse off to the sidelines, leaning against him.

"Dad!" Chuck shouted.

"Fool thing to happen. I pulled a leg muscle as I hit the ground. Looks like we blew that event, Chuck."

"How bad is it?"

"Bad enough, Chuck. Tough break. If I could have won the way I wanted to today, this would have been our last rodeo. It was to be a surprise for you."

Dad sounded so bitterly disappointed.

"*Is* Vet School *next for you?*"

This young man has made his choice, and a wise one, we believe. How about you?

Choosing a career in veterinary medicine is a big decision. Being a veterinarian is more than just a job, it's a way of professional life, one that requires a dedication beyond that of many other careers you might choose.

A veterinarian is often a pioneer, always a scientist, using his skill and his knowledge for the benefit of the farmer and the general public.

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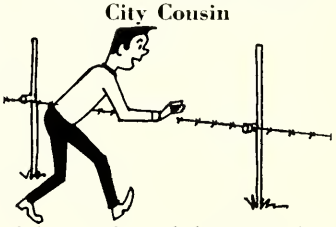
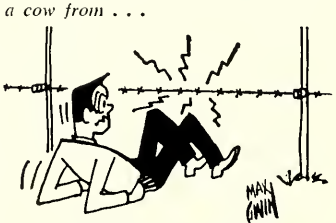
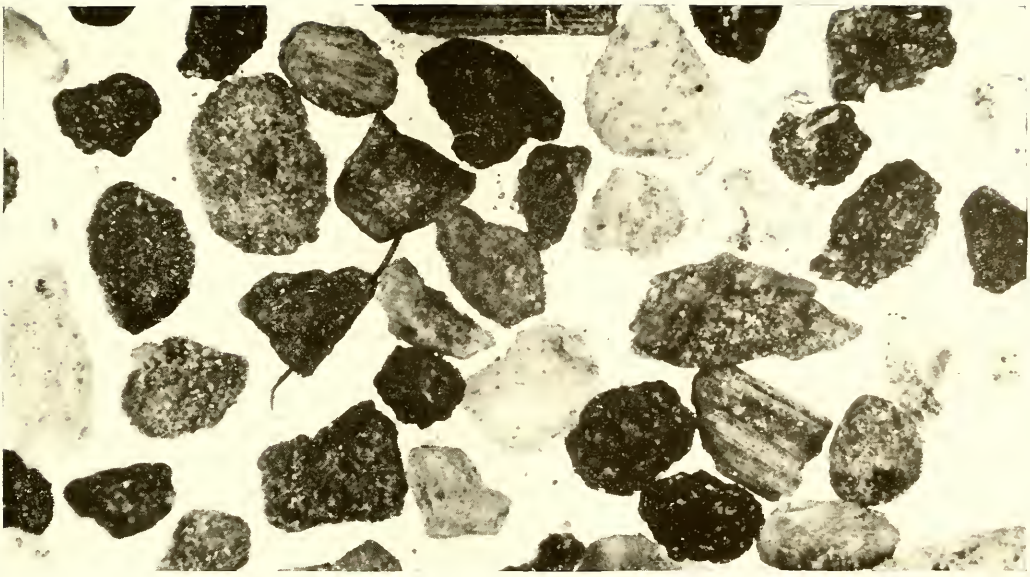
City Cousin



"I don't see how a little wire can keep a cow from . . .



. . . getting electrocuted!!"



Charred meat scraps like these are not accepted by MoorMan's. Sample of each shipment undergoes chemical and microscopic analysis. Insures feeders of consistently high-quality feeds.

Why MoorMan's Mintrates mean "your money's worth"

A farmer can buy 40% protein hog feed for as little as $80.00 per ton—or he can pay as much as $180.00 per ton. Which feed is the best buy? Does he make the most money by buying the feed that costs the least? Or does the highest priced feed mean that *it* is the best?

Two factors control the "difference" in feeds of comparable protein content:

1) Types of ingredients used as a source of protein

2) Quality of the ingredients used

Many types of ingredients can be used as a source of proteins. But many of the inexpensive sources do not supply a good balance of amino acids. As a result, protein feeds using only inexpensive protein sources may sound cheap. But they cost more because it takes more to produce 100 pounds of pork.

MoorMan research scientists are constantly studying ingredients that could be used as a source of proteins. Their objective is to establish the "balance" of proteins that will help hogs gain faster on less feed. As an example, MoorMan's Mintrate* 45 for Hogs contains 7 sources of protein—fish meal, whale meal, tankage, meat scraps, blood flour, soybean oil meal and dehulled soybean oil meal. This combination of protein sources has proved to be an effective formula to help cut pork production costs.

The *quality* of ingredients used is just as important as the *kinds* of ingredients used. So, MoorMan's research teams must test every shipment of protein ingredients that they receive. If the meat scraps are undercooked it lowers the quality. If they are overcooked the burned particles are not as digestible and your hogs don't receive the protein they should. So, samples are taken of each shipment of protein received. And each sample is subjected to chemical and microscopic analysis, to be certain the ingredients used are always top quality.

MoorMan's believe it is their obligation to supply American farmers with livestock feeds that will produce meat, milk and eggs at lowest possible cost. Quality control is a vital phase of this effort at Moorman Mfg. Co., Quincy, Ill.

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*Pat. Pend.

BUCKNER

MFG. CO., INC.
P. O. Box 232, Fresno 8, California

He unpinned his number from his shirt with a long sigh.

"I'll have to tell them I can't make the wild bronc riding event."

"You go to the trailer and lie down, Dad," Chuck said. "I'll tell them and then send for a doctor."

"All right, son. I believe I'll do that."

One of the riders took his horse and Dad limped through the gate. Chuck edged nervously around the arena. He took one deep breath. He knew what he must do. His shaking fingers pinned Dad's number to his shirt. There would still be a Donners in the wild bronc riding event, or he would die trying.

His hands were clammy. He knew there were some startled looks sent in his direction as he climbed up to the top of the chute. He had a weird thought that this was surely happening in a nightmare.

"Look, kid, you sure you want to try this? Takes all a man's got——"

"I've still got two strong legs to squeeze with," Chuck said grimly. "I'll make out."

He had one pure moment of panic as he climbed down gingerly into the saddle. The bronc was jet black and Chuck had caught a glimpse of his angry, red eyes.

Somehow he found courage to tighten his grip on the reins and nod his head.

"All right . . . let 'er go!"

The chute opened and the horse was out of it like charged dynamite. Chuck braced himself for the first bone crushing lunge and squeezed his knees tighter still. He kept his left hand free and in the air, the other he kept clutched tightly around the reins.

The bronc was fierce and strong. He had a will the like of which Chuck had never seen before in a horse. He thundered about the arena, stamping, screaming, circling and bucking to unseat him. Dimly, Chuck heard the roars of the crowd in the stands.

His right arm ached unmercifully. If only he could bend it, have it supple again. But there was no time to think of it. Only time to try and outguess the wild horse's wicked, lurching attack.

Suddenly, it became more than just a horse to Chuck. He was fear, too. A big, black monster that somehow he had to conquer. If he failed now, he would never again be able to climb on another horse, and he knew it.

Sweat and tears of fatigue blurred his eyesight. Would the whistle never, never blow? Every muscle in his legs was rigid and yet he managed to cling to the barrel-shaped, writhing blockbuster beneath him.

Then he made a mistake and let the horse discover his one weak spot. He gave one unexpected twist and Chuck lost the reins. He felt himself spinning

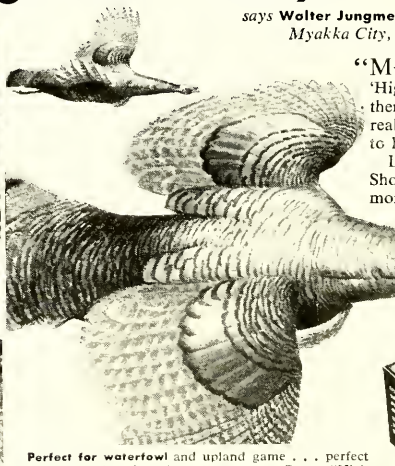
(Continued on Page 52)

PETERS POWER

"...gets tough with turkeys"

says **Walter Jungmeyer,** *Rancher, Myakka City, Florida*

"Every shot counts when the turkey season is open down here in Florida. We've got good cover for wild turkeys on my 10,000-acre ranch and have had quite a lot of experience with these wary game birds."



"My wife, Bobbie, and I both use Peters 'High Velocity' shells and recommend them to all our guests. Those blue shells really pack the range and punch you've got to have when you're out after gobblers."

Learn a lesson from Walter Jungmeyer. Shoot Peters "High Velocity"—there's no more powerful ammunition in the world!

"Turkeys are tough to hunt. Hunters know that they're the most wary and cautious of game birds. They're on their guard all the time, and any little noise or movement will spook them."

Perfect for waterfowl and upland game . . . perfect for any make of modern shotgun . . . Peters "High Velocity" shotgun shells deliver uniform patterns every time and their "Rustless" priming gives you split-second ignition. Insist on Peters "High Velocity" at your dealer's!

PETERS packs the power!

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Make Your FARM POND SAFE

By Jane Foreman

FARM ponds are being built at the rate of about 200,000 a year. The Soil Conservation Service estimates that it has helped to plan more than 1,000,000 and many more have been built without their assistance. Because these ponds are being used for recreational swimming, a real safety problem has arisen—one which Future Farmers can help solve.

The American Red Cross has developed a do-it-yourself rescue station especially designed for farm ponds which has already proved its worth. It requires the simplest possible equipment—items that are likely to be close at hand: a post, fishing pole, innertube, a length of rope, large tin can, and a set of Red Cross instructions.

With these materials assembled, strategically placed, and properly maintained for instant use, danger from drowning can be greatly reduced.

The Red Cross points out that it is not the non-swimmer who is most likely to get into trouble. It is usually the person who can swim just a little. Often the victim is near shore where one of these aids can be used to pull him to safety without the rescuer risking his own life trying to swim to him.

Here are the instructions for the safety post:

1. Set a 2″ x 4″ or 4″ x 4″ **post** (preferably painted yellow) about 15 inches into the ground, and standing not more than 4 feet high, near the water at any point where swimmers might get into difficulty. Paint "THINK THEN ACT" or similar warning in large red lettering down length of post on two or three sides exposed to view. About one foot from top of post, attach metal shelf bracket, wooden arm, or 60-penny spike as rest for coiled rope and innertube. Post should be braced at bottom to secure.

2. Inflate **innertube** from tractor front wheel or wheelbarrow and paint words "FOR EMERGENCY ONLY" on exposed side in large white lettering.

3. Securely tie a **40-foot length of rope** (¾ inch manilla or synthetic fibre) to the inflated innertube at one end, with a 4″ piece of 2″ x 4″ fastened at opposite end to prevent slipping through hands, or from underfoot, when thrown.

4. A fishing pole—Use a 12- or 14-foot bamboo pole or a suitable sapling of about the same length. Since the pole will be used to extend to anyone struggling in the water, the tip should be cushioned with friction tape. Pole should be painted white. Secure it to post between two 2½″ finishing nails placed near top of post.

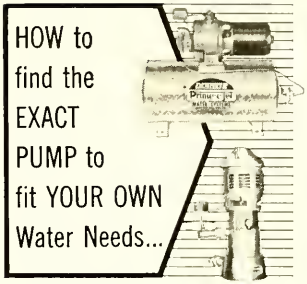
5. A tin container—a 46 oz. fruit juice can, sometimes designated on can as 1 qt. 14 oz. or a larger can. Remove one end, then slide inverted can over top of post and nail down from top through center so that the can can be rotated to facilitate reading directions.

6. A poster of safety tips, rescue procedures, and emergency telephone numbers. (Red Cross has prepared such a poster for distribution this summer. Ask your local Red Cross chapter about it). After applying coat of spar varnish or shellac to can, attach poster around can mounted at top of post. Let dry thoroughly, then varnish exposed side of poster to protect against deterioration from weather.

A completed farm pond safety post.

The 12 farm pond safety rules included on the Red Cross poster are good ones to always have in mind:

1. Small children should always swim under adult supervision.
2. Learn to swim well enough to take care of yourself in the water.
3. Piers and boat landings should be well built and securely braced.
4. Rescue equipment such as rope, innertubes, or reaching pole should be readily available. Check innertubes periodically for sufficient inflation.
5. Learn how to give artificial respiration. (See April-May issue of *The National FUTURE FARMER*)
6. Water supply should be checked and approved by your local health department.
7. Fence your pond, if possible, and lock the gate.
8. Clear pond bottom of all rubbish in swim areas.
9. Mark off deep water and unsafe swimming areas with posts or floats.
10. *Remember:* Air mattresses and innertubes can be a hazard. They sometimes float away or become deflated.
11. *Never* swim alone! Even the best swimmers get into trouble.
12. General water safety education should be arranged for all users of your pond. Consult your local Red Cross chapter for additional information.



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. . . dairy cleaner that softens hardest water!

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The GRAHAM SCHOOL is dedicated to the future success of all BEEF AND DAIRY MEN by providing complete visual demonstrations and practical "on the farm" training to help students understand SHY BREEDING, STERILITY, ARTIFICIAL INSEMINATION, REPRODUCTIVE ORGANS, DIAGNOSIS OF PREGNANCY, RETAINED AFTERBIRTH, UDDER TROUBLE and many other subjects every herdsman should know. YOU LEARN BY DOING!

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GARNETT, KANSAS

Model shown: Bonneville TR7/A

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For week-end fun and a thousand work-day chores.

Fun and farm work go hand in hand when you own a versatile Triumph motorcycle. The new '60 models are powerful, smooth-performing and exceptionally economical to operate.

With a Triumph, you herd cattle, patrol fences . . . do a host of other chores around the farm both faster and easier. Triumph is also a fun-filled pleasure partner for your weekend trips. Ride and own a sizzling Triumph . . . the hottest motorcycle ever built. See the new models at your nearest Triumph dealer's.

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Mail this coupon today for FREE 1960 full-color catalog showing the complete Triumph line and the name and address of your nearest Triumph dealer. Send coupon to nearest address:
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In the East: The Triumph Corporation, Towson, Baltimore 4, Maryland

Name .....
PLEASE PRINT
Street .....
City or Town ..... State.....
Telephone Number..... Age .....

(Continued from Page 50)

through the air, the hard thump as he went down to meet the dusty arena. He was stunned but able to roll over quickly as Dad had taught him. He felt the swish of horsehooves just barely miss his ears and send dirt spewing in his face. Then there were two riders and the wild bronc was chased back to the pens.

"You all right, kid?" someone asked.

"Sure," Chuck nodded.

But he was so nearly exhausted he could hardly walk out of the arena. Tanner came running.

"Good gravy! Good gravy!"

Chuck was too tired to say anything. Tanner grabbed him by the shirt collar.

"Good gravy, man, you just probably won top money. You Donners men. I never seen the likes of you——"

Chuck shook his head.

"I was thrown before the whistle."

Tanner grinned.

"You must need your ears cleaned out. The whistle blew before you left the saddle and ate dirt, Chuck."

Dimly, Chuck noticed the use of his right name.

"I'm in no mood for jokes, Tanner."

"Who's joking?" Tanner grinned. "Hey, I take back all I said. You rode better than ever, even with that stiff arm."

"So you're convinced now that it really is stiff?"

Tanner's face colored.

Suddenly Chuck laughed, the kind of laugh he hadn't felt in his bones in a whole year. Tanner laughed, too. Then Dad was there, coming back through the gate, limping badly. They looked at each other for a long moment.

"You fool kid, I should break your neck," he said roughly, but proudly and affectionately, too.

"The Donners took top money, Dad. You won't have to be ashamed of your coward any more."

"Ashamed? Son, I've never been ashamed of *you*."

Chuck frowned.

"But I thought——"

"I've been ashamed of myself but not you, Son. I brought it all on you by training you to follow in my footsteps, by letting you get hurt and setting you up for the others to call you coward."

"I always wanted to be a rodeo kid, you know that."

Dad grinned.

"Even now?"

"Well, maybe not so much."

"Good. We've got enough for that ranch now, with our winnings today. There's something else, too, Chuck. There's an operation for your arm."

"An operation?" Chuck asked.

"I didn't want to tell you about it until I had the money for it. If we're lucky, you'll get rid of that stiff elbow."

◆◆◆

On
The Farm
With

Kenny Gray

Kenny and his father were among the first Mississippi farmers to buy bacon type Landrace hogs. Now they market a high grade Landrace-Duroc cross.

"HE'S A SMART farm manager with progressive ideas," that's how veteran operators describe Kenny Earl Gray, of Fulton, Mississippi, the student secretary of the Future Farmers of America.

An American Farmer Degree winner, Kenny has built a $7,500 enterprise from a pig, a calf, and an acre of corn.

The 20-year-old Future Farmer operates a farm with his father, Crafton Gray. They set the pace for most Itawamba County, Mississippi farmers. Kenny and his father built one of the first hog parlors in north Mississippi and were among the first to stock bacon-type Landrace hogs.

As a freshman in high school, young Gray became interested in the FFA and worked on several local committees before being elected chapter president.

When he was a senior at Fulton High School, Kenny and his first cousin, Martha Gray, took top honors at the 1956 Mississippi FFA Convention. She was named state sweetheart and he was elected state president.

By 1956 Kenny had become interested in public speaking and won the district contest. Last summer he campaigned for the governor of Mississippi by making speeches.

"New ideas and modern equipment are musts for the progressive farmer," the student secretary says. "For instance we had to *try* a hog parlor to be sure it was a good thing, but we wouldn't swap it for anything now."

The 24 x 56-foot parlor (biggest in the county) with a capacity of 80 hogs kept Kenny busy until he entered Mississippi State as a junior last fall. He attended Itawamba Junior College in Fulton where he was president of the student body. Kenny has dropped his college work for a year to handle the many duties of his national FFA office.

The first year the Grays used a hog parlor, 51 pigs were weaned from five sows. At seven weeks the pigs weighed an average of 33 pounds.

Kenny used good judgement when he encouraged his father to buy Landrace stock. Their first Landrace crop was topped out in five months instead of the usual six. His experiment of crossing Landrace and Duroc hogs has paid off with a high-grade market hog which combines Duroc poise with Landrace durability.

"Good records are just as important to the farm manager as good stock," Kenny emphasizes. "My father has been in the feed and hatchery business for many years. He taught me plenty about keeping books—my biggest job in our joint operation.

"Being an FFA member has been one of the greatest things in my life," he says. "If I had to make a choice between a college education and being associated with the FFA, I'd choose the FFA."

Last year he served as chairman of the executive committee for the state association. But Kenny's biggest thrill came at the 1959 National Convention when he was named student secretary.

The young farmer had to make an important decision last summer. He was offered a job with Mississippi Senator John Stennis in Washington, D. C., but decided instead to try for a national FFA office.

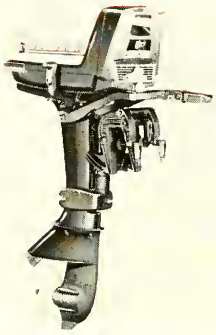
Each summer Kenny raises 6,000 broilers to help with his school expenses. His plans for the future are to carry out his duties as an FFA officer, get his degree from Mississippi State, and eventually return to operate his own farm.

Kenny became a full partner with his father, Crafton Gray, after being graduated from high school. He keeps farm records for the partnership.

FISHING CONTEST

SIMPLE TO ENTER!

EASY TO WIN!



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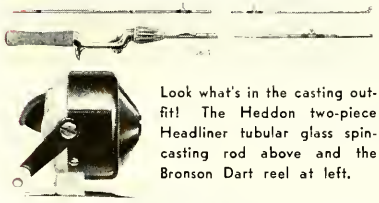
Casting outfits to the three top winners in each class! A bonus prize to the first 100 to enter!

EVERY ENTRY WINS A PRIZE



Look what's in the casting outfit! The Heddon two-piece Headliner tubular glass spin-casting rod above and the Bronson Dart reel at left.

CLASSES

1. Largest fish—Each fish will be judged on the basis of how close it comes to the record catch of its own species.
2. Catfish—The largest catfish caught regardless of specie. (Not eligible to compete in class one.)
3. The greatest total **weight** of pan fish caught in any one day. (A pan fish is a small fish suitable for frying whole.)
4. The greatest **number** of pan fish caught in any one day.

CONTEST RULES

1. Anyone can enter the fishing contest if he is under 21 years of age at the time he catches the fish.
2. Your fish must be caught between April 1 and August 22, 1960. Your entry must be postmarked not later than midnight, August 22, 1960.
3. Your fish may be caught in the waters of the United States or its possessions, or in the waters of Canada or Mexico. You must comply with the fishing laws of the place where you catch your entry.
4. You must catch the fish yourself unassisted, but they can be caught with any kind of pole, rod, reel, or line and on any kind of lure or bait. (Trotline not accepted.)
5. You must submit a close-up side view photograph of your entry if it is a small mouth bass, pickerel, or walleye at the time of entering the contest. For others a photograph is not necessary but the judges reserve the right to ask for a picture or a sworn statement before awarding a prize for a specific catch.
6. Each contestant will be eligible to win one prize only (except in the case of the grand prize) though he may submit as many entries as desired. In the event someone submits more than one entry, the top place entry will be considered.
7. In case of ties, the one with the earliest postmark will be declared the winner. Judges are the staff of **The National Future Farmer**, and decisions of the judges will be final. Entries cannot be acknowledged or returned. Winners will be announced in the October-November issue of **The National Future Farmer.**

ENTRY BLANK

The National FUTURE FARMER Fishing Contest

Your entry must be postmarked not later than August 22, 1960!

PLEASE PRINT

1. If entering Class 1 or 2 fill in this part:

Kind of fish ..... Weight: lbs. ..... ozs. ..... length .....
(Exact name: whether trout is Brook, Rainbow, Lake; bass is largemouth, smallmouth, etc.)

If entering Class 3 or 4, fill in this part:

Weight of fish ..... lbs. ..... ozs.; Number of fish caught .....

2. Where caught ..... Date caught .....

Caught in fresh water .....; Salt water .....

3. Caught with: Rod & Reel .....; Spinning Rod .....; Fly Rod .....; Other .....

4. Caught by: (Your name) ..... Age .....

Address: ..... City ..... State .....

5. Signature of parent or ag teacher .....

Your ag teacher or parent must affirm your entry by signing it. They do not have to see you catch the fish, but must see the fish. They must certify the kind, weight, and length of your fish; or In the case of the pan fish classes, must certify the number or weight of your catch.

Mail entry to Fishing Contest, THE NATIONAL FUTURE FARMER, Box 29, Alexandria, Virginia.

Live Bait Facts for FISHERMEN

By Vlad Evanoff

AN EXCITING PART of fishing is preparing for such a trip. But when you haven't much time, searching for natural baits can be annoying and buying bait takes money. So many keep and raise their own.

Worms, for example, are plentiful in the spring. When it gets hot, the ground dries and they go deep. So it's smart to dig worms when they are plentiful and keep them until they are needed. Almost any kind of big wooden box or tub filled with a rich loamy soil can be used. Put the worms on top and let them dig down into the soil. Remove those which do not go down or appear sick or injured. For feed you merely mix some leaves, grass clippings, remains from fruits and vegetables into the top layer of the soil.

The larger "nightcrawlers" can be caught at night on a lawn or in a garden. They come out of their holes after a rain and crawl around. Use a dim flashlight or cover a bright light with orange or red transparent paper. These big worms are sensitive to a bright light or heavy walking.

You can raise worms to sell but you will need larger boxes or several boxes. Or you can raise them outside in so-called worm "beds." The best worms for this purpose are the "redworms" or "red wrigglers." They can be obtained from a bait dealer or tackle store, but it's best to order breeder worms from a worm ranch or farm. Their names and addresses are listed in the classified sections of most fishing and hunting magazines. One thousand worms cost about $4.00 by mail and you usually get free instructions on how to raise them.

When you have a large quantity for sale, put a sign by the road leading to your place such as "FISHING WORMS FOR SALE." You'll soon have fishermen coming to buy. Larger quantities can be sold to fishing tackle stores or fishing camps.

The cricket is another bait which can be raised in large quantities. Keep them in large cans such as garbage cans or metal drums cut in half. Spread on the bottom about four or five inches of fine, clean, damp sand. Then spread a three-inch layer of excelsior or straw over the sand, and stock with 40 or 50 adult

Photo by Missie, Missouri Resources Div.

Good bait makes fishing more fun.

crickets. They can be caught in fields or ordered by mail from bait dealers.

Feed crickets in a small pan or saucer filled with chicken mash. Water is best supplied from glass jar fountains used to water chicks. Crickets lay eggs in the sand which hatch in 15 to 25 days and the young become large enough for bait in about three months. Screen the can tops with fine mesh wire to keep out ants, mice, or other pests which kill or eat crickets. It will also keep the crickets from escaping.

Another bait you can raise is the meal worm, sometimes called the "golden grub." It is the larvae of the black wheat beetle which you may have seen in grain bins. They are easily raised in washtubs or boxes covered with screen wire to prevent the meal worms and adult beetles from escaping. Spread a layer of chicken mash or wheat bran several inches thick on the bottom of the container. Place raw carrots or potatoes on top of the mash to provide moisture. Then stock with several hundred meal worms. These will turn into adult beetles which will lay eggs to produce more meal worms. Some of the adults can then be removed to other boxes to start new colonies. Besides being sold for fishbait, the young meal worms can also be sold to pet shops and aquariums for fish food.

If you have a farm pond or small lake, you can also raise minnows for bait. They are always in demand and can be sold at good prices. The best minnows for small lakes or ponds are the blunt nose minnow, the fathead minnow, golden shiner, and redbellied dace. Most of these can be bought from bait dealers, but a good supply to stock your pond or lake can be bought from someone who raises them in large quantities for bait. He may also give you information on how to raise minnows. Or you can get a booklet called "Raising Bait Fishes" (Circular 35) which costs 45 cents. Send money and request to the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

If you don't want to raise minnows, you can usually seine them from a nearby stream, lake, or river. Or you can use a minnow trap placed on the bottom. Minnows die easily if the water is not properly aerated or if it gets too warm. A minnow bucket will keep them alive and healthy.

There are many more natural baits which can be used in fishing. Most of these cannot be raised but must be caught. Frogs, for example, make good bait for bass and pike. They are found along brooks, swamps, lakes, or rivers. Frogs can be kept alive in small wire cages until they are used.

Another good bait is the crayfish which is found under rocks, logs, and in the weeds of brooks, rivers, and lakes. They can be caught by hand or with a small dip net.

Grasshoppers make good bait during August and September when they reach a good size. The best time to catch them is early morning or after a shower when they are not so active. Hook them lightly under the collar and flip them into a stream or lake to catch trout, bass, or panfish.

Various grubs and caterpillars can also be used for bait. In fact, almost anything that flies, crawls, or hops, can usually be used for fishbait.

Regular trimming with the Wahl Clip-Pet electric clipper keeps your animal's coat in top condition. Grooms entries for the fair. Makes your last-minute "touch of perfection" quick and easy!

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It's never too hot to get your field work done if your farm equipment is powered by heavy-duty air-cooled Wisconsin Engines. In fact, you can rely on a "Wisconsin" to keep your equipment going in 140° F. heat—if you can stand it.

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To beat the heat and lick the job . . . specify "Wisconsin Power" (3 to 56 hp.) for your equipment. Send for Bulletin S-249. Write Dept. F-150.

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MILWAUKEE 46, WISCONSIN

World's Largest Builders of Heavy-Duty Air-Cooled Engines

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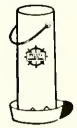
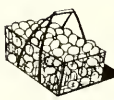
PILOT BRAND OYSTER SHELL



in the hopper...

helps put more



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This tried and proved eggshell material helps you get peak production of stronger-shelled eggs ... eggs that bring top prices. And it costs little more than a nickel a year per hen. Keep PILOT BRAND before your flock at all times. It pays!

PILOT BRAND OYSTER SHELL

In the bag with the big blue Pilot Wheel. At most good feed dealers.

FOR POULTRY

Oyster Shell Products Company
Mobile, Alabama

FARMING WITHOUT SOIL

(Continued from Page 25)

mixed, the unused elements will tend to collect in the sand. It is wise, therefore, to thoroughly wash out the bed with plain rain water every two months.

Growing Plants

Sow seeds exactly as in soil but first warm the sand with plain warm water. Plant the seeds and keep moist with plain warm water until the leaves show through. Feed half strength solution until you thin or transplant. Because we have complete control of the solution, interesting experiments can be done with solution variations. Tomato plants are very sensitive to a change in the nutrient solution. You can learn the effects of various element shortages by feeding several pots with different solutions. For instance, low nitrogen turns leaves yellow and the plant becomes thin and erect. A phosphorus shortage will make leaves bluish green or purple and curl downward. Insufficient magnesium causes veins of lower leaves to stay green while the blade between grows yellow and dies. Other effects can be caused by changes in solution. Only your imagination limits you.

There are many books available for more information and guidance. The basic principles are the most important. Remember, with complete control of your plants you are, in a sense, replacing nature. If problems arise, check carefully what you have done. Possibly the instructions have not been followed exactly. Perhaps you were careless in measuring chemicals or made the solution too strong. Some foreign element may have entered your bed from impure sand, corrosion, or a careless dribble of insect spray.

Soilless gardening is a painstaking science that can give much satisfaction and useful knowledge about growing plants. But it requires enough care to make sure that your plants are getting only what you want them to get. Experience and sympathy with your plants will aid best in increasing your skill and enjoyment.

SCHOOL'S out—or nearly so. Seniors are making final plans—for work or college. But it's a time when all students should take stock of future plans. If you have higher education in mind, these books may have a message for you. You can probably find them at your nearest bookstore. If not, write the publishers.

Guide to Colleges (New American Library, 501 Madison Ave., N. Y. 22; Price 75c)—Features facts and figures on more than 2,000 colleges and universities. Tells when to apply, what scholarships are offered, and if you can get in. Information on tuition, fees, and dormitory costs. Also discusses total enrollment, number of out-of-state students, and other up-to-date information for the college-bound. A good buy!

Which College For You (Harper and Brothers, 49 E. 33rd St., N. Y. 16; Price $2.95)—Serious about college? Edward Hodnett's easy-reading book will take some of the indecision out of your system. It'll help you pick a college on the basis of your personality, goals, scholastic record, special abilities, and finances. Probing chapters on self-analysis, research, and actually making the final decision.

College Entrance Examinations (Barrons Inc., Great Neck, N. Y.; Price $1.98)—Authors Brownstein and Weiner give you model college entrance aptitude and achievement tests—with answers. One section presents answers to math and science tests. Another gives a drill for verbal and math tests. Still another contains a vocabulary list with definitions and usage. Finally, there's a list of examination requirements for accredited colleges. Caution—this is just a series of *sample* examinations. It's good for *practice only* while preparing for an entrance exam.

How to be Accepted by the College of Your Choice (Channel Press, Great Neck, L. I., N. Y.; Price $3.95)—Dr. Benjamin Fine's book says nine out of ten applicants are often rejected by their first-choice colleges. Then he sets out to help you avoid this situation. He tries to show you how to meet college admission requirements. Dr. Fine tells how many colleges to apply to—and when. He tells the mediocre student how to prepare for college, and discusses financial assistance and extra-curricular activities.

College Bound (Barrons, Inc., Great Neck, N. Y.; Price $1.98)—Part of this book discusses preparing for college. Pointers on selecting a college, financing college, and applications. But it also features valuable tips to use *after* you get in college. Helps you adapt to the life of a college freshman. Tells how to study efficiently. Tips on pledging, pinning, and hazing. There's a helpful section on evaluating the many professions. If you're undecided on a major field, it'll help you.

Sportrait

Nellie Fox of the Chicago White Sox.

By Stan Allen

THE AMERICAN LEAGUE'S Most Valuable Player Award last year didn't go to a home run slugger, batting champ, or a 20-game-winning pitcher. It went to a scrappy second baseman of the Chicago White Sox, Nellie Fox.

Only 5 feet 9 inches tall and weighing 162 pounds, Jacob Nelson Fox is another great "little" man in the sports world. His first love has always been baseball and back home in St. Thomas, Pennsylvania, he was a familiar figure around the sandlots at an early age. He had his teacher right at home in his dad who had been a good semi-pro player.

During the war years of the '40's, major league teams had to hold their spring training in the north and it happened that the then Philadelphia Athletics held their camp near St. Thomas in Frederick, Maryland. Nellie went to their camp for a tryout and after looking him over, the Athletics signed him to a pro contract when he was just 16 years of age.

He first went to Lancaster in the old Interstate League where he appeared in 24 games and compiled a .325 batting average. Playing outfield in class D ball at Jamestown in '51, he batted .304. Back at Lancaster in '45 he hit .314 and broke in at second base. Nellie kicked around the minor leagues for five years before making the Athletics team in 1949.

After hitting .255 in '49, he was traded to the Chicago White Sox for Joe Tipton. This was a break for Fox as Sox Manager Paul Richards saw a lot of potential in him and devoted a lot of time to Nellie's game. Nellie took advantage of this and his game soon improved. Although he only hit .247 in '50, he came back in '51 to hit .313 and took over second base.

Nellie is not a power hitter as his records show only 20 home runs in his 12 years in the majors. But he uses that "bottle" bat of his so well that he has led the league in singles for seven seasons. He is also a master of the running bunt and can spray hits to all fields. Even with his small strike zone Nellie doesn't get many walks because he likes to hit and will not try for a walk. He has a good eye at the plate, too, having led the league eight times in fewest strikeouts. Last year he was at bat 624 times and struck out only 13 times. He has been over the .300 mark in batting six of his 12 years in the majors and owns a .298 lifetime batting average.

Most experts agree that Fox is the best second baseman in the majors today. It has not always been this way. He was rather awkward at first. Many long and hard hours on the practice diamond have proven what practice and determination can do. He is not real fast and does not have an exceptional throwing arm which he makes up for in the exact way that he plays the game. He is one of the best in chasing pop flies and can cover more ground than most players. He teams up with Luis Aparicio to form the best double play combination in the league. Last year Nellie had 827 balls come his way and missed only 10 to earn a respectable .988 fielding average. He has led the league in attempts and putouts for eight years.

Although his hitting and fielding are big assets to the White Sox, just his presence on the field is a big factor in their attack. His hustle and constant chatter fires the team up. It has been said, "as Fox goes, so go the Sox." If a nickname were given to Nellie, it probably would be "Iron Man" for he holds the major league record in consecutive games played by a second baseman, having not missed a game in the last 669 Sox games. For such a little guy who mans the keystone sack, this is quite a feat. There are some mighty big fellows who try to cut him down to avoid the double play.

Among his many honors, Nellie has been voted to the All-Star Team nine straight years and has been named All-Star Major League Second Baseman five times. He was American League Player of the Year last year. In his only World Series, he has nine hits in 24 times at bat for a .375 average. From all indications at the start of this new season, the same old Fox is at second base.

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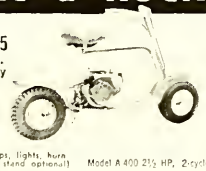

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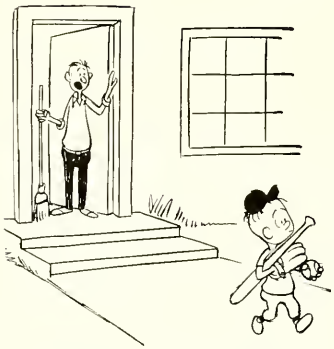


". . . And don't play in the street—Mommy has the car today."

The dentist who was consulting an elderly patient, asked, *"Could you pay for a dental plate if I found one necessary?"*

The shrewd old farmer hesitated for a moment then replied, *"Would you find one necessary if I couldn't pay for it?"*

Roy Shepard
Jacksonville, North Carolina

After a day of shooting at ducks without hitting any at all, one of the hunters said: *"It's getting late. We might as well go home."*

"Yeah," the other replied, *"let's miss a couple more and quit."*

Frank Bromley
Cleveland, Tennessee

Pupil: *"I'd like to skip school today."*
Teacher: *"Why?"*
Pupil: *"I've got to chop wood for the oil burner."*

Gary Graybill
Masonville, Iowa

A mother kangaroo called to her baby, *"Come out this minute!"*

The baby crawled out of her pouch. Then momma kangaroo gave it a good spanking. *"I'll teach you,"* she scolded, *"not to eat crackers in bed."*

Gene Parker
Libertyville, Iowa

Hear about the businessman who took his first ride in one of those foreign sports cars yesterday? After traveling about a mile, (downtown) he turned to the driver and said, *"This is really a great ride, but what's that high wall running along side of us?"*

"That isn't a wall," replied the driver. *"That's the curb."*

Dale Howe
Othello, Washington

One blistering hot day when they had guests for dinner, a mother asked her four-year-old son to say grace before the meal.

"But I don't know what to say," the boy exclaimed.

"Oh, just say what you've heard me say," said the mother.

Obediently, the boy bowed his head and murmured: *"Oh Lord, why did I invite those people here on a hot day like this?"*

Eddie Trapp
Lake Creek, Texas

An Indian who was visiting a trading post in the west, heard a white man play a piano for the first time. The Indian gave this report on the incident: *"A Paleface him punch teeth of Big Boss; Big Boss him holler."*

Johnnie Thomas
Wallingford, Kentucky

"Say, Bill, I think I saw your wife downtown today. She was trying to park between two trucks."

"Did she make it?"

"Yes."

"Then it wasn't my wife."

Joseph P. Grady
Mt. Olive, N. C.

Employer: *"We need a responsible man."*

Job Applicant: *"That's me. Wherever I worked, if anything went wrong, I was responsible."*

Joseph Matthias
Manitowoc, Wisconsin

"Bill Jenkins just called and wanted to borrow your workhorse—I told him I was too busy to come over."

Bob: *"Whisper the three little words that will make me walk on air."*

Sue: *"Go hang yourself."*

Wilmer Davis
Broadway, Virginia

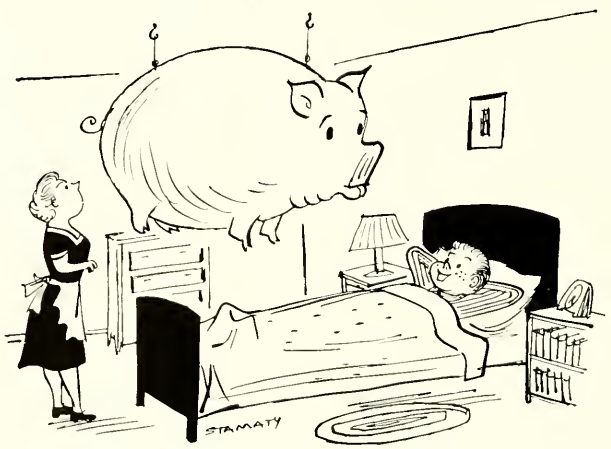
Man passenger on a crowded streetcar (to a lady who has trouble removing her purse from her pocket): *"Let me pay your fare, madam."*

Lady (indignantly): *"I can pay my own fare as soon as I can secure my purse."*

Man: *"Oh, very well, but you have already unbuttoned my suspenders twice."*

Dwight McNew
Wildie, Kentucky

Charlie, the Green Hand



"I made it to help me think 'big' in my production."

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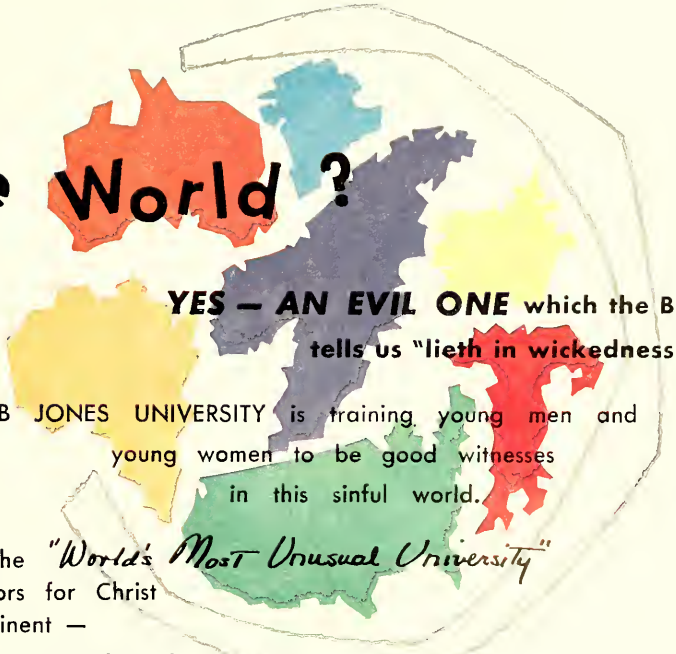
One World ?



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"Repair cost for two GLEANER combines after 4,000 acres was less than $20."—*Ben Holding of Covington, Okla.*

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"Over 3,000 acres of wheat, oats and maize with almost no repair expense at all."—*Wayne Smith, Snyder, Okla.*

"Less than $5 for repairs—2,494 acres to date."—*Ralph Francis, Dumas, Texas.*

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